THE CULTIVATOR.

THIRD — To Improve the Soil and the Mind. — SERIES

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A Day's Notes near Geneva.

In the year 1833, Mr. PATRICK SHIRREFF,, a practical farmer from East Lothian, in Great Britain,—than which there is said to be no better wheat district in either Scotland or England—made an extended tour through this country. When at Geneva he was introduced to Mr. JOHN JOHNSTON, and in the book giving an account of his tour, published after his return home, he speaks as follows of what he saw:—

"This season he (Mr. J.) has 60 acres in wheat, equal to any crop of similar extent I ever examined. His system is to sow clover amongst wheat, which affords good pasturage in autumn, and is fed off in the following spring; the land is plowed in the end of June, and, after an imperfect fallowing, sown with wheat in autumn. * * * Mr. J—— applies fifty heaped Winchester bushels of lime to an acre, which costs nine cents per bushel. Gypsum costs 15 cents per bushel, and is only used for clover and Indian corn. * * * Half a bushel is sufficient for an acre, and imparts an improved appearance to the crop in four days. * * * Mr. J.'s cows are beautiful animals, and very fat."

What was thus written nearly a quarter of a century ago, applies almost word for word to the farming of Mr. Johnston, as we found it now. He has, however, although still hale and active, made an arrangement with a tenant to farm under his supervision and direction, and the past year has proved the new arrangement one of mutual satisfaction and profit.

It will be difficult to say much of what we saw without running a risk of repeating what is already recorded in the back volumes of this journal. Mr. Johnston has 300 acres of a stiff and naturally wet soil, which by means so often advocated in print that the most listless of readers can hardly be entirely ignorant of their nature—he has brought up from comparative sterility to the production of crops unexcelled, and we think scarcely equalled, in Western New-York. Yet, as he himself remarked in a recent communication, it is absolutely surprising that no more are induced, by the publication of so apparently simple a mode of renovating the soil, to try it, even if upon a small scale. Some of his neighbors, after watching and often laughing at him for thirty-six years, are gradually following his example; more, however, persist in calling him merely a very "lucky" man. Their own winter-killed and stunted grain, their bare pastures and thistle-grown meadows, are sufficiont evidence that similar "luck" has never lighted on their domains.

DRAINING has been very "lucky" in Mr. Johnston's hands. As the pioneer in the introduction of tile under-drains, until they now form a prominent feature in American husbandry, he would in England probably have received, ere this, a valuable testimonial from his fellow farmers. His present demonstration of their effective and profitable use could not be more complete. Beginning—as every new idea should at first be received in practice—at a moderate extent, he satisfied himself that draining was an operation, on a soil like his, paying its own way, and permanently adding to the productiveness of the land; and, since these careful opening experiments, he has gone on until the "crockery" under his fields may now be numbered by hundreds of thousands; until spots where man or beast would before mire, are now firm enough to bear the heaviest load, and, what is more, from absolute unproductiveness have become the most productive of all.

LIME is also in a measure synonymous with Mr. Johnston's "luck." He has used it on a large part of his farm at the average rate mentioned in the above extract, although in some cases putting on considerably more—indeed on one or two acres the quantity was a hundred bushels each. While the effect is apparently a permanent one, we understood that the increase in the first crop would more than pay its cost. This is another of those instances so puzzling to science, in which burnt lime works wonders on a *limestone soil*—the earth of which not only rests on limestone, but already contains lime as a prominent ingredient. Mr. J. began with lime, as with draining, in a small way, until its effects were thoroughly tested; he is now satisfied that the $25 to $30 an acre which the tiles and lime cost, have been one of the best expenditures he ever made. Ashes he has not found to pay. Salt he has used largely at the rate of a barrel to the acre; it brings the wheat to earlier maturity, and gives a bright, stiff straw. Plaster he applies largely upon corn, also on timothy and clover, at the general rate of about a bushel to the acre.

But in the *home-manufacture of manures*, Mr. J. has perhaps been more "lucky" than in anything else. This it is that enables him to raise so large crops of

corn; to keep up his crops of wheat; to get the greatest returns from the money buried in the tile, and sown broadcast in the lime. We found extensive manure heaps, the product of last winter's feeding, awaiting application this fall. The yards in which the cattle and sheep are wintered are largely supplied with straw, and the well-decomposed mass is used at the rate of twenty to twenty-five large two-horse wagon loads to the acre, applied to those grass lands in the fall which are to be plowed for corn in the spring. This gives a surprising crop of corn, and makes the land even too rich for wheat.

We should here say that Mr. Johnston's soil, which is a stiff clay—now, from the addition of manure, good drainage, and long and often repeated working, brought more into the condition of a clayey loam—is not what is called a *corn soil;* it is just the one, however, for wheat. Some fields have grown wheat every alternate year for the 36 Mr. J. has tilled them; every other year lying in fallow, and the yield ranging from 20 to 40 bushels per acre, and for the last eight years averaging, after deducting for the frequent and severe ravages of the midge, twenty-five.

Reference was made in our note about the crops last week, to Mr. J.'s field of corn. It contains twenty-three acres, and with the exception of some small lots in favored situations, is said to be the best between Buffalo and Albany. This field was wheat and fallow alternately from 1822, for 30 years. In 1852, the trial of implements was held at Geneva; the wheat crop on it that year was very good, as many strangers who took the trouble to drive out expressly to see it, may remember. While in wheat, this field was several times manured—once with 40 bushels unslacked lime per acre. Mr. J.'s subsequent treatment of it illustrates well his views of the rotation best suited to his circumstances. This field was seeded with clover and timothy, hay was cut from it for three years, and in 1856 it was manured in the fall with over 22 two-horse wagon loads to the acre of the richest manure, well rotted, made from sheep and cattle fed on Indian corn and oil-cake meal. After this corn crop it is proposed to take two crops of oats, or one of oats and one of barley, before again putting it in wheat, as Mr. J. considers it too rich for the last named crop without reducing it by the growth of the others.

Several ideas advanced by Mr. J. at different times have given rise to considerable controversy. The mode he has found most profitable, of applying manures in the fall, has been the subject of much writing during the last year. He takes a view of the wheat crop which will be considered not less remarkable by many, and which must attract the attention of all who affirm that wheat growing ere long will have to be given up in many parts of the country. He thinks it *the least exhausting crop he raises*—clover seed the most exhausting. On these points we shall be glad to receive the experience of others. Are good farmers generally disposed to dispute the opinion?

There are a few particulars further, in relation to out-door matters, which we wish to mention before going into yonder feeding yards and barns. First about

THE CORN CROP.—Mr. J. uses the planter manufactured by Emery Bros. of this city, of which he expresses a high opinion. His field this year is in hills three feet each way, but we understood that he prefers the mode he has generally employed, of planting in drills three feet four inches apart, and one stalk about every six inches in the row; he has found the yield of corn by this method greater, and that of stalks increased about one-third. Plaster he sows broadcast over the field, with one of Seymour's excellent machines. He cultivates as soon as the leaves are out of ground, and three times subsequently at intervals of 10 days or so, according to circumstances, and would go through with the field once more if there was time. During twelve years, he has had from 20 to 40 acres annually in corn, and has averaged 50 bushels of 60 lbs. per bushel to the acre for the whole 12 years—pretty good for a farm which has no *corn soil*, and giving further evidence of the "luck," in good management and careful cultivation.

In connection we may state that a field of ten acres, almost actually a swamp, purchased by Mr. J. ten years ago, for the sake of securing an outlet for some drains, was itself thoroughly drained, and the next year he took a crop of corn from it which paid him back both the cost of the land and the cost of the drainage.

THE HAY CROPS on Mr. Johnston's farm are very fine. They are mostly timothy, with some natural grasses and a little clover intermingling. This mixture he considers as good for dairy cows as pure clover, the superiority of which over pure timothy* his experience leads him to admit. He expected to finish cutting, nearly, by the 18th inst. The crop this year must reach two and a half tons to the acre—certainly a finer one we never saw—the heads standing higher and more thickly than much of the wheat one sees, while the undergrowth, if we may so call it, of juicy leaves and stalks, is so compact that a good mowing machine and pair of stout horses find it all they can well manage. Mr. J.'s average hay-crop has been two tons to the acre. It may be mentioned in connection that he has a fine barometer, which has several times been of far more service than its price.

The effect of drainage, Mr. J. thinks is not so perceptible to the eye upon the grass crop, as on grain; the great benefit resulting from it, being an increased *thickness* upon the ground. Wet lands shoot up a rank growth, but a well drained field is covered with a thickly woven turf, and yields a proportionably greater crop.

THE WHEAT CROP.—Mr. J. has this year 50 acres of splendid wheat, which, with that of his next neighbor, Mr. SWAN, (who has 66 acres in one field,) is altogether superior to any thing within the writer's experience. Certainly no farmer could desire better. Mr. J. would consider it good for plump 40 bushels, but the weevil is in it, and must have done great injury. We suppose at the time this reaches our readers it will mostly have been harvested and the results made known.

Mr. J.'s experience on the much mooted chess question, although before referred to in our columns, may still be of interest, especially as we have lately received several letters advocating the theory of transmutation. When he first came to this country he was not disposed to credit the story that wheat would turn to chess, but a field of that grain in his neighborhood which was badly winter-killed, came up so fully and unmistakably *chess*, that he could not resist the evidence, and was converted on it, as many others have been, to firm belief in the possibility and existence of transmutation. But when the subject was discussed in the old *Genesee Farmer*, he was led to look into the matter more deeply, and finally determined that no wheat of his should be subject to any such vagaries. He would *sow no more chess seed!* Now he has not raised a wine-glassful of chess in more than twenty years. Before that he "had lots of it, and was sure that wheat turned into chess."

His mode of cleaning seed wheat is as follows:—

"To clean all the chess out, take the riddles out of the fanning mill, leaving the screen in—take off the rod that shakes the riddles and screen; pour the wheat slowly into the hopper with a basket or a half-bushel; turn the mill a little quicker than for ordinary cleaning, and every grain of chess will be blown out, unless where three chess seeds stick together, which is sometimes the case with the top seeds."

With this simple preventive he has shown, quite as conclusively as is possible in any other way, that all chess springs from its own seed and not from the wheat. When will other farmers give up trying to prove the existence of transmutation, instead of endeavoring to effect the non-existence of chess in their own fields?

* As referred to in a note on page 64 of last week's CO. GENT., giving the results of some experiments by Col. Capron.

During the year of fallow which has generally alternated with Mr. J.'s wheat crops, he is particular to keep the land well worked and free from weeds, plowing at least three times in the season. Quack grass, as it is commonly called, many farmers find it very difficult to exterminate; but he says there is no trouble on drained land. If you kill it then, it *stays killed*—on wet land, it seems endowed with the nine lives of a cat—or more.

It may be of interest to mention the division of his land among the different crops. Of 300 acres, 50 are in wheat, 23 in corn, 23 in oats, 60 in hay, 64 in fallow, and the balance, with the exception of 30 in wood, are devoted to pasture.

But one of the main sources of profit for Mr. Johnston, both as supplying in large quantities the best manure, and thus preserving and increasing the fertility of his land—and as furnishing a market for much that he raises—is

THE FEEDING OF CATTLE AND SHEEP.

He has very extensive farm buildings; we give on p. 75 a cut representing one set of them, with yards, sheds, &c., the dimensions of which are given with the description—the drawing being on the scale of nearly 50 feet to the inch. Beside this range of buildings he has two others similar, although not quite so large. The plan of their construction may be of service to others.

Cattle, Mr. J. selects with great care, and his success proves the excellence of his judgment. He determines much by the *handling* qualities of the animal, choosing for fattening purposes, one that possesses a "moderately thick, mellow, elastic hide, thickly covered with soft, wavy hair." As he thinks it wiser to grow 300 bushels of wheat on 10 acres, rather than on 30, so he finds it pay far better to secure such a constitution as shall attach 800 pounds of flesh to one stomach, than to have two digestive systems at work at his mangers, and both net him only a thousand pounds. His long practice has given him a great degree of skill.

Of sheep he has been a still larger buyer. As a general thing they prove more profitable—always when the price per pound live weight is the same. A four year old steer in pasture, his experience proves about equal to seven sheep. But when they are stalled or yarded the former consumes more than the latter. The sheep will fatten well on a pound per day each of oil meal and what straw they want—the steer will require 8 to 12 pounds of oil meal daily, and not a little of the best hay. Then the pelt of the one will sell for $2—those of the seven amounting to $14, while the hide of the latter will only bring about six.

The period of feeding is about one hundred days, commencing from the middle of November to the 10th of December. Oil cake Mr. J. purchases by contract and by paying the cash and taking large quantities secures it at lower rates than might otherwise be the case—generally getting it slightly less than $30 per ton. He proposes to contract for thirty tons for next winter's use. He has tried feeeding corn and cob ground together, but considers the cob useless if not injurious—especially to sheep, which digest everything they take into their stomachs.

Most of the hay the cattle eat is taken from feeding boxes in the yards. To get these sufficiently light to be portable, and yet strong enough to bear hard usage, is a great desideratum. Mr. J. has effected this purpose admirably. The cut (fig. 1) shows one side of the feeding box he contrived and has used entirely for many years, drawn on a scale of 10 feet to the inch. It is six feet square and six in hight. A bottom may be laid in if desired, of loose boards resting along the horizontal scantling shown at *b e*, but Mr. J. generally fills them with straw to this level and then puts hay on top; the side openings *a d c*, are protected by a strip of wood on one side of the siding boards and a light bar of iron on the other—these being pinned on by bolts and screws, the heads of which are shown by dots. These are large enough for four cattle to feed from at once without quarreling, will last for many years, and have proved in every respect just what was wanted. We should add that the four corner posts are of wood 4 inches square.

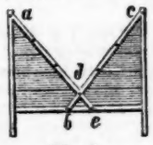

Fig. 1.

But decidedly the most compact, convenient, and inexpensive mode of stalling we ever saw, is that contrived and long used by Mr. J. The cut at the top of page 268 shows at *J*, the ground plan of a line of stalls. Fig. 2 represents the front of these stalls extending

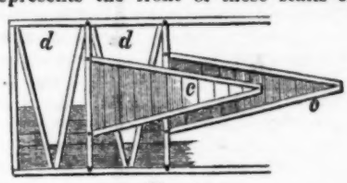

Fig. 2.

along the line just above the letter *J* in figure 4; the openings represented in fig. 2 at *d d* look through into the manger, the width of which is shown by the dotted line below *I*, in figure 4. The sides of the stalls, *c c*, are gates turning on the stanchions that support them, and here represented wide open. One animal is driven in, the gate shut upon him, and he stands in a space 8 feet by 3, with his side to the gate,

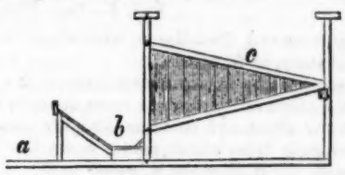

Fig. 3.

(shown in fig. 3,) putting his head through the opening (*d*, fig. 2,) into the manger (*b*, fig. 3.) Then another follows; the gate is shut upon him, and in less than a week the cattle will learn to go in of their own accord, while the shutting of the gate is much less trouble, more secure, and leaves far less opportunity for their fighting, than any mode of tying. Each animal may stand, lie down, or eat, without molestation by the others, or inconvenience of any kind to himself. The distance the front of the stalls is boarded up, is shown in fig. 2. The manger (*b*, fig. 3.) is 3¼ feet wide, and the avenue beyond, *a*, 6 feet, for convenience in feeding. The construction of the manger is shown at *b*, so that the food shall slide toward the bottom, but not be drawn into the stall.

The animals are put into these stalls morning and night for several hours, spending the remainder of the time in the sheds and yards at will, where they are supplied with water, and, as well as in the stalls, with an abundance of straw for litter, both as conducing to their own cleanliness and comfort, and, more particularly, for the increased amount and value of the manure thus made. The straw absorbs a considerable portion of the liquids of the manure, but Mr. J. says that if he were a younger man, he would immediately construct capacious tanks, and save it all. The manure is heaped in the open air, where it lies generally undisturbed, although we believe he sometimes considers it well to turn the heaps over once, until the time of its application to the soil, from the 20th of September to the 10th of October, when it is thoroughly decomposed and in excellent order.

We may pause here long enough to tell a story of one of Mr. J.'s neighbors, who is well known as a *first rate* farmer, but who never could so far overcome his views of what reason and theory apparently taught him as to coincide in Mr. J.'s autumn application of manures. We rode over to see his place, and found

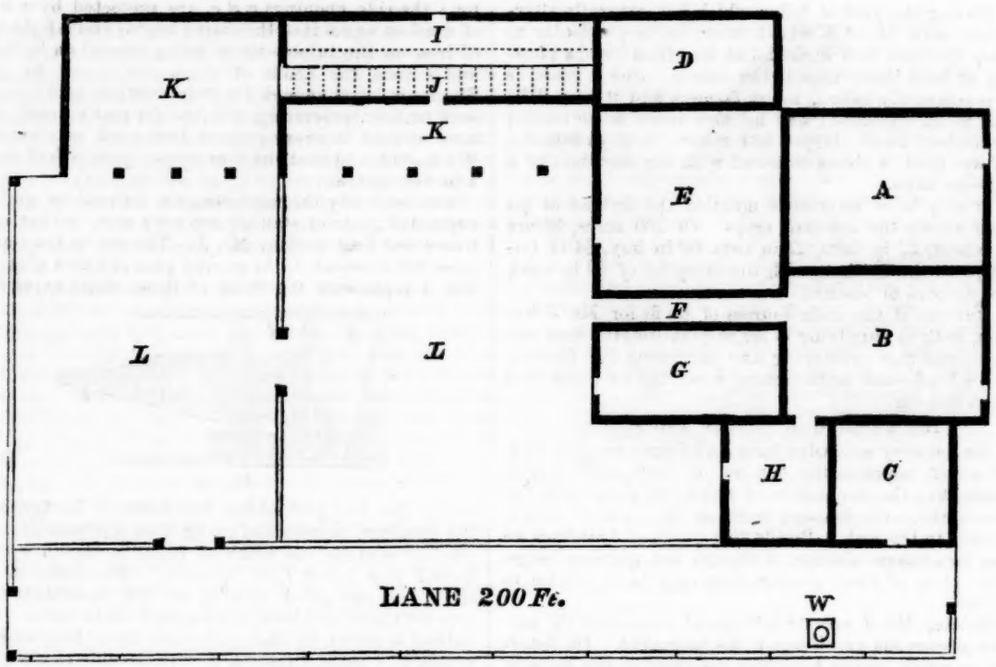

Fig. 4—One Range of Mr. Johnston's Farm Buildings.

DESCRIPTION.—*A*, Tool Room, with wheat in the sheaf on second story, 45 ft. square.

B, Granary, 45 by 20, with grain bins on the outer side and on the side next to *A*. The room above is devoted to wheat in the sheaf, and contains also the threshing machine, the grain from which passes down into a fanning mill beneath (in *B*, near the side next to *C*.)

C is 28 feet square, and contains the sweep horse power, which moves the thresher in the room above *B*, as well as the fanning mill in *B*, from which last apartment the chaff is carried into the room

H, 20 ft. by 28, and the straw into

G, where it is very convenient for use in the yards, into which this room opens.

D, Hay barn, 34 by 18 feet.

E, Another straw room, 34 by nearly 50 feet.

F. Gangway to granary.

W, Well.

I, Gangway six feet wide, for feeding—the dotted line represents the mangers to receive the feed of the animals in the stalls at

J, These stalls are eight feet by three.

K, *K*, Are open sheds.

L, *L*, Yards in which the cattle feed from racks represented below, as sheep from troughs.

In the engraving the position of doors and of the gates in the fences (represented by open double lines,) is shown so plainly as to need no explanation.

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that of two fields of corn upon it, one was decidedly in advance and of better color and promise than the other. Mr. J. inquired the reason. "Well, if it must be confessed, Mr. Johnston," was the reply, "*the manure on the best piece was applied in the fall.*" Friend J. naturally considers this something of a triumph of his system, but his neighbor is not disposed to admit it as such until still further trials.

Of cattle Mr. J. generally buys about 40 three or four year old steers the last of November, which he calculates to sell in February, when he takes another lot of as many more, which are fed moderately, to put them in good condition to be turned to the first grass, and they become fat as can be desired in July. The former lot are allowed from six to eight quarts of corn or oil-cake meal per day, according to the quality of the hay, and the latter about four quarts—both having access to all the hay they want. The quantity of the manure thus made, and the results of its application can better be seen by visiting Mr. J.'s fields and inspecting his crops, than in any other way.

It is said that the old race of Scotch divines, after running up the heads of their discourses to *seventeenthly*, or thereabouts, always added nearly as many more by way of "practical improvements." With greater mercy in this present instance, we desire to present but six:

1. Farmer, THINK FOR YOURSELF! Drains and drain tile were new things both here and abroad, when friend Johnston first experimented with them; lime was almost as much so. But he has gone ahead in these and other respects for himself, leaving others to follow
2. Raise no crop that don't beat those of your neighbors. This may be rather stronger than our meaning, which simply is, Be sufficiently ambitious; determine to equal, endeavor to excel others in your manner of farming, and all its results.
3. Cultivate your soil thoroughly. One main object of all Mr. Johnston's drains is to prevent the baking of the soil into inseparable clods, to keep it friable, while he labors for the same end by frequent use of the plow, the cultivator and the hoe. Economise manures.
4. Avail yourselves of all the labor saving machinery you can. Friend J. must have been among the very first in this country to construct a threshing machine. He has always made use of every implement possible to take the place of and economize human toil. Reapers, mowers, tools to till the soil and machinery to store the harvest are all found in improved forms and constant application on his farm.
5. Remember that a specific crop or so many pounds of flesh, always pay better, the smaller the field or the fewer the mouths, from which they are produced. That is, better till one acre well, than scratch over two or three. Good care of animals in the end will be most profitable.
6. READ THE AGRICULTURAL PAPERS. Write for them. Mr. J. hailed with pleasure the first number of the old *Genesee Farmer*, and from that day to this has been one of our constant subscribers and most practical contributors. He has thus learnt the progress others were making, has adapted their suggestions and experience to his own wants, and, moreover, what he has proved good, he has labored to disseminate as widely as possible, and the benefits derived from his own skill and practice he has endeavored to confer on others.

Shanghæ Fowl.

The Shanghæ fowl was originally brought from the northern part of China, particularly about the city of Shanghæ, from which it takes its name. This bird is the common domestic fowl of that part of China; but how long it has been bred there, or when first introduced, we are not able to ascertain.

The Celestials breed these birds without any regard to points, plumage, or color, being satisfied with large bodies. A missionary, who spent eight years in different portions of China, recently informed the writer that the common practice about Shanghæ is to breed together indiscriminately, smooth and feather-legged birds, as well as those of different colors. Another missionary says, "There is no difference at all between the fowls called Shanghæs and Cochin Chinas. In reality they *all* are Shanghæs. Cochin Chinese fowls are a *small, inferior* kind, not equal to the natives of the United States, and it is not believed that any have have ever been taken to America."

The editors of the "Poultry Book," lately published in London, quote from a letter they received from Mr. Robert Fortune, who has passed many years in various parts of China, as follows: "I firmly believe that what are called 'Cochin Chinas' and 'Shanghæs,' are one and the same. The Shanghæ breed seems to be more common about Shanghæ than anywhere else in the north; but I find it all over the low country of that part of China. The southern breeds have long been well known to ship captains and English residents; but there is nothing very marked in their character. The Shanghæ breed occurs both with feathered and unfeathered legs, but more frequently with unfeathered."

Our first informant sustains the statement of Mr. Fortune in respect to the fowls of Southern China, for he says that he travelled quite extensively in this portion of China, and that during three years labors there the only large fowls he saw were a few that a French gentleman had just brought down from the north.

From such competent and disinterested testimony, we are compelled to conclude that all such names as 'Cochin China,' 'Royal Cochin China,' 'Imperial Chinese,' 'Hong Kong,' 'Hong Ho,' 'Bramah Pootra,' and numerous others, should all be known by the family name of Shanghæ, and be classed only by color, as white, buff, black or red Shanghæs.

Some forty years since the ancestors of a large mixed tribe of fowls were brought to this country from China and adjacent islands, and since have mainly been bred in and about Philadelphia, bearing the name of 'Bucks County Fowl,' and other aliases. Most of these were smooth legged, but a few were more or less feathered.

The first of our late Shanghæ importations was made in the spring of 1847, and since that time a Shanghæ tide has flowed and ebbed over the American continent. It is low tide now, where it is to be hoped it will long remain. Shanghæs were first introduced into England in 1845, by a present made to the Queen. The English have usually called all large China fowls 'Cochin Chinas,' but of late have adopted the term Shanghæ.

The Shanghæ cock is a large, bold, upright bird, strongly distinguished for the length, loudness, hoarseness, and awkwardness of his half guttural crow. Most of the sub-varieties have large, single, serrated combs, the top running considerably beyond its point of attachment to the head. He has a strong and slightly curved beak. The eye is rather small, bright and prominent; face bright red; wattles, large, thin and pendant; ear-lobes very long, loose, and folded forward like a second wattle. His neck is about nine inches long, and is somewhat arched; wings short, rounded outwards, their shoulders concealed in the breast-feathers, and their tips covered by the body-feathers and the saddle-hackle. His breast is broad, but wanting in fulness; the thighs are wide apart, large, comparatively short, smooth in some, in others heavily feathered quite down to the knees; shanks should be short, and, with the booted, more or less feathered down the outer edge, quite to the end of the outer toe; the stern is densely covered with long downy feathers, technically called "fluff," well rounded out; the hackle, both of neck and saddle, is long and abundant; while the tail is short and sometimes covered by the long saddle-feathers. The weight of a full grown bird is from ten to twelve pounds, while a few have weighed more.

The hen agrees in general character with her liege lord, but is two or three pounds lighter. Comb and wattles smaller; body deeper, with more breast; 'fluff' over the hips and stern softer and more plentiful; saddle-feathers so abundant as to form a kind of arch from the back to the tail, frequently extending so far up the tail as to make it appear very short.

The legs of both sexes should be yellow, though we have seen some very fine white birds with a greenish-blue leg, and superior black ones with dark legs. These birds should be low on the legs, like our cut, while they are generally quite too tall.

The principal subvarieties of the Shanghæ family are, the white, the buff, the cinnamon, the partridge colored, the gray, or Brahma Pootra of a few writers, the Dominique and the Black.

The white birds are lighter in weight than any of their darker relatives, but we once thought exceeded any of the others for laying qualities. They are less hardy than the colored birds, and, as for eating, none of the Shanghæs, in our judgment, are as good as the common domestic fowl.

The buffs have been more numerously bred than any other variety, and have furnished more good birds than any other color. Most of these have black tails, and a few of the outer wing quills are also black; while some have red, others yellow, and others neck-hackles striped with black.

The cinnamons are poorly represented in this country, both in respect to number and quality.

The partridge or grouse-colored Shanghæs are also scarce in this country, though we have seen some very fine birds of this kind. The hens have more breast than most of the others.

The dominique is perfectly represented in color by our domestic dominique or hawk-colored fowl. Excepting a slight tinge of red upon the wing-coverts of the cock, both sexes are quite uniformly marked all over, having the ground of each feather light blue, and quite evenly barred or pencilled with a dark blue and gray.

By the gray sub-variety we include only that class of light colored birds that a few have wrongfully called Brahma Pootra, while S. O. Hatch, Esq., one of the early breeders, uniformly called them 'Chittagong,' as is supposed by the 'knowing' from their relatives, the Chittagongs of Philadelphia. A gentleman near this city (Albany) has been a breeder of the Philadelphia bird for more than twenty years, and when the 'Brahma Pootras' came into vogue breeders themselves could not tell the difference between those raised from his old stock or the best modern birds. In passing, it is but just to say that these birds threw out some very fancy colored fowls, having pure white or creamy white bodies, dark red hackles, outer wing-quills black, and black tails. Some have single and others 'pea combs.' These birds, when kept clean, make a fine appearance on a large, smooth, green lawn. But they cannot be bred of uniform colors, like the Creoles and many others.

Black Shanghæs are yet scarce, though we have seen some superior birds of this hue. Says a late English writer, "there is one peculiarity about them, that the cocks, though perfectly pure in color till about six months old, after that age become brown in the hackle, frequently show red feathers in the wings, and are often found on close examination to have white under-feathers, and others barred with white." The writer has seen some entirely black—the hens should always be. Some have dark legs, though yellow legged birds are preferred.

Having briefly described the leading sub-varieties of the Shanghæ family, it only remains to make a few practical remarks about pairing and breeding.

None but healthy birds must ever be mated for breeding purposes. Birds from two to four years of age produce stronger and larger chicks than young pullets. Both sexes should possess the color desired in the progeny; but to the hen we must mainly look for size.

Shanghæs, as other birds, should not be bred "in and-in" too much. Indeed too much care cannot be taken to avoid this deteriorating practice. Such a course is sure to reduce the size, weaken the constitution, and frequently changes the form and colors of the progeny. Cocks or hens should be exchanged every year or two, but great care should be used in making these exchanges, lest the flock be impaired by impure blood.

These hens lay well in winter with good keep, but are excelled by many others in summer. They are most inveterate sitters, so that, unless very highly fed during the warm season, it is almost impossible to keep them from sitting, thus losing much of their time.

These fowls are very liable to have the roup, especially in a climate as cold as this. This disease is contagious, and all birds attacked with it should be removed from the henery at once.

The Shanghæs are great consumers, and when dressed afford a large amount of offal. Old fowls full-fed become very fat, but their flesh is rank and unsavory. The breeder will find it very difficult to fatten the chicks before eight or ten months of age. They do not reach their full weight until more than a year old. This is a very serious objection as a market fowl. For market it is better to cross them with common fowls.

Roosting perches for Shanghæs should not be more than eighteen inches high, and about two feet apart.

These fowls require careful protection in winter, or they will suffer from the cold. A correspondent, residing as far south as Kentucky, recently informed us that during the last two winters he had lost several of his best Shanghæs by freezing. Others have made the same complaint.

Were we asked our advice, we should say to farmers, raise Turkeys instead of these uncouth Shanghæs; for the Turkey will consume but little, if any more in winter, less in summer, is less in the way, and brings a much better price in market. If you want chickens for your table, raise the Gray Dorking; and if it is eggs that you wish, get the best strains of Spanish.

Dwarf and Standards Mixed.

I have an orchard of standard apples, set thirty feet apart, four years planted. I would like to know through the Cultivator, whether you think it would answer to plant dwarf trees between those, making the distance fifteen feet. THOS. E. GAWTHROP. *Pike Co. Ind.*

In answering this inquiry we will reduce the question to figures. If the apple trees are well cultivated they will send out shoots each year at least two feet long. The trees of our correspondent, with the best treatment, supposing the shoots start a foot back from the tips of each previous shoot, will have increased a foot in diameter on each side, or two feet in all, for each year. If he has therefore managed them well, the tops are now about *eight feet* in diameter. In six years more, or by the time the dwarfs have arrived to a good size and productiveness, the apple trees will be nearly twenty feet in diameter. As a proof that this estimate is within bounds, our correspondent will please turn to page 206 of last volume of the Country Gentleman, or page 141 of the present volume of the Cultivator, where V. ALDRICH gives the measurement of the tops of several of his apple trees, ten years planted, and subjected since to good cultivation—the average of which is about 18 feet high and 18 feet in diameter. Such trees 30 feet apart will leave but small spaces unshaded at mid-day, and none at all when the sun has declined a little. The roots run at least as far each way as the height of the tree itself (our experience makes the distance greater,) and consequently in less than ten years, the roots will have covered the whole surface. Dwarf trees, planted between, will therefore be injured by the shade above and by the apple roots beneath, and cannot succeed well. They would do incomparably better where they can have the whole sun above and the whole soil below.

Where, however, the apple trees receive nothing but neglect, and do not grow more than two inches per annum, and their heads do not become more than ten feet in diameter in thirty years, they would not injure the dwarfs for a long time—but it would be hard to find the man who would thus neglect his standards, and at the same time give his dwarfs half that thorough and enriching cultivation they absolutely require.

Number of Stalks in a Hill of Corn.

One of our correspondents writes us that he has lately had a conversation with a neighbor, who has the reputation of being a very observing, sound and sensible man, in regard to the question in the caption above, and that it was the firm conviction of this man, that in the case of Dent corn, and of all kinds which grow to a large size, a larger amount of *sound* corn will be obtained, when there are not over three stalks allowed to grow in each hill, than when there are four, or any number over three, other things of course, being equal. He said that he had observed repeatedly that there were usually two good sized ears of such kinds of corn on each stalk, when there were only three stalks or less in a hill, whereas, when there were four or five stalks, there was seldom more than one ear on each, and of these some would be not unfrequently small, and at harvest prove nothing but soft corn or nubbins He further stated that it was his belief that more depended, so far as the amount of good sound corn was concerned, on having but a few stalks in a hill, than on having the hills at the distance of three and a half or four feet in the rows; and that he had obtained a better crop from corn planted in drills, with stalks about one foot or a little less apart, in one direction, and four feet in the other, than his neighbor in an adjoining field had from the same kind planted in the usual way.

My Mode of Farming.

EDITORS COUNTRY GENTLEMAN—On a farm that twelve years ago could keep (or did keep) only seven cows, one yoke of oxen, and one horse, by buying fifty dollars worth of grain, I now keep twenty cows, one yoke of oxen, and one pair of horses, besides young stock to replace old or poor ones sold. There is now no more tillable or improved land on the farm than there was twelve years ago. As I will show you, it is all owing to turning the least land to the greatest profit, saving manure, &c.

My cattle and horses are not allowed to roam all over my farm, and grub the very life from every spear of grass as soon as it shows itself above the ground, and waste their manure, (which is the great loss of farmers,) where it will wash away, lose its strength, and be of no use, and thus impoverish the land unless you are at a great expense to buy manufactured manures, and I claim that one cent saved is full as good and better than one earned.

I sell milk for New-York market, and farm it to suit the business, but my mode of farming will apply nearly as well to those who make butter.

In spring, as soon as it will do to turn out cattle, (for me it will not do as soon as it does for some people,) I turn my cows into a swamp of four acres which starts first—next into a wood-lot of twelve acres—next into a stony and bushy lot of eight acres—bringing them up to milk at night in the milk-yard, and feeding a little hay, which they relish after eating fresh grass, as the hay is salted when put in the barn. They are always kept in stalls in the yard at night, where I save the manure. Thus they are changed from one of these three lots, which I cannot plow or mow, until my meadows are up enough to mow, which is usually the 10th or 15th of June, but understand that no land of mine that I can plow or mow is grubbed by cattle.

As soon as my grass around the milk-yard, is large enough to mow, my cows are yarded for the summer, (unless it is to let them out for a day or so in the wood-lot for more exercise than they get in the yard,) and fed mowed grass, or sowed corn, three times a day—first, in the morning before milking—second, at noon while my team is eating in the stable at the barn, which is no time lost to speak of—third, the last thing at night after milking. My horses and oxen are kept in the stable to hay, roots, and grain, until the spring-work is done, when they are fed same as the cows.

I have found by actual experience, that I can feed my cows night and morning as quick as I can drive them to and from pasture, and the time spent feeding at noon is paid one hundred fold by the manure saved by keeping them yarded.

I usually sow an acre of corn as soon as the ground is warm enough, say the last of May, and continue to sow small patches near my milk-yard at different times through the summer, and have a good crop for winter use. I find an acre of corn is worth as much as two of grass, for I often get two crops off of one piece, and it is excellent fodder for a change in winter.

In managing in this way, I know I can keep three times as many cows in better condition, and get more milk, than to let them grub for a living as is practiced by most of our farmers. However some of my neighbors begin to see the folly of their ways, and do not pasture their cows at all. When my cattle are in a yard, I can go to bed and not be afraid of their breaking into my neighbor's fields or into the streets, and being driven to pound for safe keeping. Besides it is a great saving in fencing. In this county rails are scarce, and I am putting what stones I have into ditches where they pay good interest, instead of in fences on the land, where they are a nuisance.

My farm is small—only one hundred acres—all but about twenty-five tillable. I raise all my own hay, grain, fruit, &c., and sell more manure than I buy, which is very little either way. My farm is improving faster than the rest of my neighbor farmers, for I have all the manure I choose to make, and my land is not robbed of every thing but the roots of grass.

I write this to encourage farmers to make the most of their farms, and am not bragging when I say I make double as much more from the same amount of land, as any other farmer in the county, unless it is some three or four who are following my practice. I will give you a description of my milk-yard, and some further details of my farming, at another time. AN EMPIRE STATE FARMER. *Putnam Co.*

Mowing Machines at Syracuse.

A few notes on some of the newer mowing machines at the great trial at Syracuse, may be interesting to our readers.

KIRBY'S MOWER, manufactured at Buffalo, was patented last year, and in the short time it has been used, has been found to possess some decided advantages. The cutting bar and driving wheel are on separate axles, so that in rising and falling over uneven surfaces, they act independently of each other; the bar following the surface of the ground, is not thrown up and down by any unevenness over which the driving wheel passes. This renders it a good mower for rough meadows. The whole machine is made of iron, except the seat and tongue, and it appeared to be simple in construction. The cog-work was not so perfect as in some others, and the small balance wheel was not perfectly counterpoised; hence there was more rattling than was desirable; for example, Hallenbeck's, which had a fine gearing and good balance wheel, and was nearly free from noise in running. This is a cheap mower—$100.

The two combined machines presented for trial by BALL, ALTMAN & Co. of Ohio, attracted much attention by their free and quiet running, and good work. Both of them had two driving wheels, which somewhat increased their cost, complexity, and weight, but their motion in consequence was very steady. By means of a racket wheel and click, they always backed out of gear, lessening the force required for running backwards. They had cutter-bars attached to the rest of the machine by double hinge-joints, which allowed the cutter to play freely up and down over a varying surface like Kirby's; and the cutter in one of them could be folded up and turned over on the frame, almost as easily as a bird folds its wings, and in this position the driver may ride upon it from one place to another, as comfortably as a gentleman in his gig.

The cam machine of DEITZ & DUNHAM from New-Jersey, possessed some ingenious points. Two small cast-iron wheels, on the ends of a reciprocating bar, played alternately in the cavities of the cam, and thus imparted motion. This alternate action appeared to lessen the jar or rattle, so conspicuous in some other cam machines.

Another cam machine, just constructed, and now for the first time publicly tried, was exhibited by PRUYN & LANSING, of Albany. The cam is a zig-zag projection on the *interior* of the driving wheel, away from earth and gravel, so injurious to other cam machines. A small wheel on each side of this cam, gives motion to one end of a lever, to the other or larger end of which the knife is attached. Like a few other machines, the fingers were near together, and being wedge form or wider backward, no stone over two inches in diameter, could ever reach the knives, and such small ones would of course fall below. We think such a mower would pass over any meadow without becoming dulled.

The cheapness of this mower ($80) is a recommendation for small farmers, even if its work is not equal to some others.

We observed a great difference in the execution of the cog-work of the different mowers. There appeared to be none equal in this respect to Atkin's, exhibited by R. Dutton, of Ohio—the form of the cogs appeared to be perfect—their faces wore bright equally over their whole surface, and they played together with a perfectly even motion. Other machines had badly made cogs, touching only at points, and jarring and rattling badly. A large share of the success of the best machines, is always owing to the excellence of the gearing.

Among older mowers, of the best class, were Allen's, Wood's, Ketchum's, Hallenbeck's, Hussey's, Burrall's, and others, which are already more or less known to our readers, and do not need any special notice on the present occasion.

Produce of Butter.

One of the April numbers of an English Agricultural journal contains the following table, containing information valuable and interesting to the dairyman.

"The relation of the food given, to the quantity and quality of the milk produced, is brought out very well in the following table, extracted from a paper in a recent no. of the Journal of the Albert Institution:"

No. of experiment.	1	2	3	4	5	6	7	8
No. of cows.	5	7	6	6	6	6	6	6
Date of commencing with experiment.	May 21.	June 22.	July 21.	Aug. 19.	Sept. 23.	Oct. 19.	Nov. 22.	Dec. 13.
Date of finishing experiment.	May 27.	June 26.	July 27	Aug. 25.	Sept. 29.	Oct. 25.	Nov. 28.	Dec. 19.
Kind of Feedings which Cattle Received.	Clover and rye grass with a few hours grazing,	Winter vetches and grazing as above,	Clover and rye grass, second cuttings,	Cabbages and grazing,	Clover, third cuttings,	Mangel Wurzel leaves and dry hay,	Mangel Wurzel leaves and dry hay,	White turnips and barley Straw,
Produce. Gallons of milk.	89⅝	122½	96¾	87	74	50¼	40¼	33¼
Quarts of cream.	30½	41	27	31	28	23	20	19¼
Pounds of butter.	30	39¾	26¾	26	23	15½	15	14¼
No. of quarts of milk to produce a qrt. of cream.	11.7	11.95	14 29	11 22	10.57	8.78	8.15	6.92
No. of quarts of milk to produce a lb. of butter.	11.9	12.32	14.7	13.38	12.86	13.3	10.86	9.47
No. of quarts of cream to produce a lb. of butter.	1.1	1.2	1.2	1.19	1.21	1.48	1.33	1.36

OBSERVATIONS.—It took an average of 10⅛ quarts of milk to produce a quart of cream; an average of 12 quarts of milk to produce 1 lb of butter, and an average 1 1 5 qts. of cream to produce 1 lb of butter. The average yield of butter from each cow was 154 lbs, the average price per lb., 9¾d. The milk vessels were earthenware (glazed); the milk was left setting for thirty-six hours in summer, and forty-eight hours in winter; the cream was churned once a week."

Heaves in Horses Cured.

A friend informs us that his best horse (which by the way, as well as himself, we have long known,) was sold to him when but four years old, by a professed jockey who intended to cheat him. He found, after the purchase was made, what he had some fears of before, that as soon as he was placed upon dry food, that he had unmistakeable symptoms of the heaves—a rather unpromising symptom for a horse so young. He resolved, however, to cure him if possible, and accordingly fed him only on wet hay, and at the same time gave *dish-water* and other greasy slops to drink, which of course he would not touch till very thirsty. But he soon learned to like this mixture, till he consumed all the slops and sour milk from the kitchen, and now, at fourteen years of age, he will gulp down swill as readily as any pig. The heaves very soon disappeared under the treatment administered; but it was nearly three years before a radical cure was effected, or until there were no returning symtoms when he was fed on dry and dusty food. He proved a most valuable animal, and since that time for many years, accomplished about twice the amount of labor, that common good horses are able to perform

A few years since the owner was visiting at a brother-in-law's, when a neighboring horse dealer, seeing the animal, demanded the price—our friend unthinkingly answered, "a hundred and fifty dollars." The brother-in-law inquired, aside, with some surprise, "what, do you want to sell that horse so low—that man will certainly call on you, for he has a *match* for your horse." "Indeed! why I would not part with him for five hundred dollars!" "Yes, he will call on *me*, without failure, to know the character of the horse; what shall I say to him, and tell the truth?" "Say to him that I am a brother-in-law of yours, on friendly terms, and that you would rather not say any thing about the horse." The jockey called as expected—the proposed answer was made, and suspecting this was a proof some secret fault, the jockey was glad to give up his purchase.

This cure may have been owing to other causes than his peculiar drink, yet the experiment is one that is worthy of attention, and if oily or greasy substances mingled with the drink have any influence on the disease, the fact is worthy of testing by trial.

"Seed Ticks" on Horses and Cattle.

EDS. CO. GENT.—I noticed your reply to S. S. C., of Bowling Green, Kentucky, in your issue of the 25th ultimo, and perceive that the inquiry of your correspondent was not sufficiently explicit, and therefore led you to suppose "a case" and reply to it. The country within several miles of Bowling Green is infested with what is termed "seed ticks," in the months of July, August and September, and in the section of the country known as "the Barrens," they are a perfect nuisance. They are a species of tick as small as a tobacco seed; they insert themselves among the hair on horses and cattle, and produce inflammation, and cause the hair to stand partially erect, and injure the health by producing capillary inflammation.

The best remedy for the evil your correspondent complains of, is to wash the parts affected with strong soap-suds, and then rub well with sweet oil or hog's lard

Spirits of hartshorn, (aqua ammonia) 2 ounces; sweet oil, 2 ounces; shake well and sponge the horses with it before riding though "the brush," and they will not take hold. B. *Sparta, Ala.*

ENTOMOLOGY.—No. 16.

The Hunter Weevil in Young Corn.

A correspondent writing from Bainbridge, N. Y., sends us "a new enemy to the corn crop," and some leaves of the corn as ate by it. This insect commences its attack when the blades of corn are only two or three inches long, and before they have unrolled, gnawing holes in them which are scarcely noticed except upon a particular examination, until after the leaves are unrolled and spread apart, when these holes become very obvious, and are then mostly long and narrow, having become elongated by the lengthening of the leaf as it grows.

In a field of seven acres, planted May 27th and 28th, there was not a hill that had escaped these insects, and an adjoining field, planted a week earlier, was still more seriously injured, whilst a third field, which was planted a week later, wholly escaped them. These facts indicate that these insects all become gathered together in those cornfields which are the earliest, so that fields which are later escape molestation, and thus overtake the early planted fields in their growth. These insects do not kill the corn, but do much injury to it by retarding its growth, the leaves becoming stunted in consequence of the wounds made in them, so that at the beginning of July the crop is at least a third smaller than it otherwise would have been. By that time the insects have mostly disappeared. Only four could be found on the third of July.

This insect is the Hunter weevil (*Sphenophorus venatus*, Say) of which a full account and description was given in the Co. Gent, June 14, 1855, (vol. v. p. 373,) and the Cultivator of the following month, (3d series, vol. v, p. 221,) and we have little of importance to add to what is there stated. The earliest cornfields should be closely watched for a week or two, soon after the corn is up, and if it is discovered that these insects are congregating therein, the most effectual and economical mode of ridding the field of them, we doubt not, will be to offer some of the children in the neighborhood a few dimes if they will pass along each row of the corn and pick up every one of these insects that can be found—furnishing them with bottles half filled with water, into which to drop and drown the insects as they gather them. Mr. Curtis, the distinguished British entomologist, alluding to what we published upon this subject, informs us that insects of this kind will revive again, although immersed in water a day or two, and that to make sure work of it, it will be necessary to empty the contents of the bottles into a kettle of boiling water.

Beetles upon and Worms in Potato Vines.

Enclosed in a newspaper just brought me from the Post-Office and marked "Country Gentleman," I find a piece of a potato stalk, upon which is two specimens of the Black blistering-fly (*Cantharis atrata*,) a rather slender cylindrical beetle, about half an inch long, and of a black color throughout. This eats the leaves of potato vines, as does also another similar insect which has been excessively numerous in some parts of our State and country of late years—the striped blistering-fly, (*cantharis vittata*.) This last has black wing-covers, their edges and a stripe on their middle pale yellow, and the head yellowish red with two black dots on the crown. In some places the potato vines have been wholly stripped of their leaves and killed by these insects.

In a cavity which it has bored in the center of the stalk, is a worm, which, so near as I can ascertain in its present dried and shrivelled state, is a species of spindle worm, which comes from the eggs of a moth or miller belonging to the genus *Gortyna*. This is an insect which I think has never yet been named and described, but I have never given it a particular examination. Potato vines are every year perforated more or less by these worms, and I have sometimes found four or five of them in a single stalk, they having mined it and its branches their whole length. Other kinds of these spindle worms bore in the center of corn, lilies, and other plants having a thick succulent stalk.

Gooseberry Insects.

A letter from Ashfield, Mass., gives some interesting facts respecting a worm which destroys gooseberries. As these worms have now vanished for the present season, and some other important insects infesting the gooseberry and currant have lately fallen under my observation, I propose at a future date to present an article upon this subject, to the readers of the Country Gentleman. ASA FITCH. *July* 24, 1857.

Diseased Apple Trees.

Can you tell me what is the matter with my apple trees? I set one hundred and twenty-five in the spring of 1856. In the course of the summer the bark on many of them turned black, although they grew well, and all started well this spring. But since then the blackest of them are dying. What is the cause and cure?

Do the King Birds catch bees? M. S. K. *Chicopee, Mass.*

We cannot with certainty assign the cause of the death of the apple trees. Probably they had been injured by the intense cold of winter, followed by the injurious effects of the sun's rays. We have known large trees, (2 or 3 inches in diameter) the bark of which had become inured for some years on one side to the sun's rays, and on the other side to shade alone, become similarly affected when their position was reversed in transplanting, but this effect is not produced on quite young trees; and in fact rarely on larger ones. We do not know of a remedy after the injury is done, but if the trunks had been shaded with straw tied loosely on, when the trees were set out, it would probably have prevented the disaster.

The king bird destroys gad-flies, beetles, grasshoppers, crickets and injurious insects generally, and in this way is a valuable assistance to the farmer, but he also occasionally feeds on bees—these he appears to watch for some time, until he selects one to suit him, and some farmers believe that it is only the drones that he destroys, which he prefers on account of their larger size. The question might be easily settled by an examination of the contents of a few birds after shooting them. Our opinion is, however, that he is a positive benefit to farmers, by the many noxious insects he destroys.

Management of Top-Onions.

EDS. CO. GENT.—In answer to inquiries in your last no., allow me to say that the top-onion will produce setts the second and every succeeding year up to at least the tenth year. My plan is to allow the bulb to remain in the ground until the third or fourth year, when it is necessary to divide and re-set them, as new onions will form around the old bulb, and new seed stalks will shoot out, forming quite a large clump to each onion originally set. C. B. BELLOWS. *Janesville, Wis.*

I would inform O. L. DeForest that the onion is not exhausted after bearing seed, but may be allowed to stand for several years, and will produce good seed yearly, unless the winters are uncommonly severe. It is the practice here to sow the seed thickly in drills in the spring; these are gathered in August, dried and kept till the next spring, when they are set out and produce early onions. The earlier they are set out the better. J. W. L.

Apple-tree Borer.

MESSRS. EDITORS—Can you or any of your numerous correspondents, give me any information in regard to "borers" in apple trees—their nature, and the remedy to be applied? In examining my trees I find that nearly all are more or less injured by "borers," and some past recovery. In a new country like ours, this is a very serious matter, and I should like much to hear from some of your correspondents upon this subject. I find in talking with my neighbors, that the trees all through this part, are troubled like my own. C. E. BLOSS. *Shiawassee, Mich., July* 15, 1857.

There is no doubt that the apple-tree borer has become widely spread through several States, and that many have their orchards infested with it, who do not at all suspect its presence, who never saw it, and indeed who may not know that such a depredator exists. Its inconspicuous appearance leads to this oversight.

The perfect insect or beetle varies from 5-8ths to 3-4ths of an inch in length, the males being smaller and more slender. It is covered with a fine whitish down, and has three brownish stripes. These insects deposit their eggs in the bark of the tree, near the surface of the earth, in the early part of summer, and only by night. when they are numerous, they often lay their eggs higher up, and in the forks of the larger branches. To *prevent* laying their eggs, soft soap deposited in the forks and rubbed about the bottom, has been found efficacious. Downing applied a mixture of tobacco water, sulphur and soap, with success; but Dr. Fitch thinks all its virtue lay in the soap. When the eggs hatch, they produce a small maggot, whitish, with a yellowish head. It eats into the bark and discolors it for a small distance around, and if the dry outer bark be scraped off at the end of summer or first of autumn, these dark spots will show where they are commencing their depredations, and now is the time to kill them most easily, which may be done at this stage by washing the scraped bark with strong ley.

At a latter stage they cut into the sap-wood, and throw out their saw-dust, when they may be punched to death with a small twig. Still later, and when larger, they go into the heart wood, and now for the first, pack their saw-dust excrements into the hole after them, rendering it more difficult to reach them. Hence the importance of taking them early.

We would recommend every orchardist to look closely to his trees at all times—to coat with soft soap early in summer—to scrape the outer bark later in summer, for the dark spots, if he has any reason to fear their presence, and to kill the young maggot at once. If left later, their presence is shown by the saw-dust appearances around their holes in the bark, when they must be cut out with a knife, or punched to death. At any stage the knife may be freely used to cut them out, for wounds by cutting are better than death by the borer. At all times exercise watchfulness and vigilance, and be satisfied with nothing short of actually *killing* the insect.

Wilson's Albany Strawberry.

Last September (1856,) I ordered of Mr. John Dingwall, Albany, one hundred plants of Wilson's Albany Strawberry. They were set on soil that was not rich the 16th of Sept. They got a growing as winter set in; I little expected so large a crop of fruit this season. Never was I more happily disappointed; they gave a fine crop. The berries were large, flavor good and sprightly, some of them measuring four and a half inches in circumference. The plant is a strong grower. Leaves large, of a deep green. This berry is much admired by all who have seen it. It appears that this berry has earned its own reputation. We congratulate Mr. Wilson on his success in raising us so fine a fruit, and for charging so small a price for it. S. WORDEN.

Insects on the Currant.

MESSRS. EDITORS—The currant can be used for so many valuable purposes, that it should receive a more general and better cultivation. It is indispensable in every garden, and deserves one of the most favorable positions, instead of being placed by fences mostly shaded during the whole day. My bushes are set by the fence, receiving the sun three quarters of the day, about one foot a part, in a border of four feet. In the fall the border is covered over about six inches deep with horse litter. In the spring I remove all this covering, and spread over the whole border about four inches deep of rich compost, and give the whole border a covering of salt hay, which keeps the ground moist, for these bushes require a moist soil. As early as possible in the spring, pruning should be done, being careful to thin out the bushes in the center, so that the air may have a free circulation. I keep up during the summer, until the fruit ripens, a constant pruning.

But my principal object in this communication, was to call attention to an insect that troubles our bushes, much to the injury of the fruit and the bark. It first appears on the underside of the leaves. The leaves before the appearance of this louse, turn in spots a dark color. On examining the leaves there is no appearance of the louse, but in a few days the louse appears and increases at a most astonishing rate, for they have nine generations at one copulation. The leaves of my bushes last year were mostly covered with this insect. This season I took about half a peck of lime and a few pounds of sulphur, and mixed it together in a tub; then slaked it with hot water, keeping the tub covered tight; then filled up the tub with water, stirring and mixing the contents well together. In a few hours it will settle clear. With a watering pot I every other morning sprinkled the bushes, beginning very early in the spring, and so continued till the blossoms appeared, and several times a week syringe with this liquid, so as to reach the underside of the leaves. The leaves on my bushes have very few of these insects, instead of having nearly all the leaves covered as last year The remedy I think will be effectual. I shall try it next season, and if the same success follows it may be considered a "fixed fact" that the application of lime and sulphur is a sure remedy. DIRIGO. *Portland, Me.*

How to Make a Horse Draw.

EDS. CO. GENT.—I once knew a man that bought a fine looking sorrel mare, that was as false as a beast could be, but he finally cured her to perfection in the following manner: He geared her to the cart, and went to the cornfield to get a load of pumpkins. After he had got some ten or a dozen on, she thought she had too much load, and refused to pull. He coaxed and petted her for some time, but all to no purpose. He next got a stick, and thumped and thrashed, with the same success. He then thought he would try another plan. He got the wheelbarrow, and wheeled pumpkins enough to make a full load, and put them in the cart, when he took her by the head again, but it was no go. He then started home, and concluded she might either pull the load or stand there until the day of judgment. But when the sun began to get low, she began to think about her supper, and started for home, passing skillfully through 3 sets of bars, and arrived at the barn in safety with her load. He put her in the stable, and fed her as if nothing had happened. She refused to pull at two other times, but she got the the same treatment each time, so she found it was no use, for she had to pull the load in the end. After that she became as good a beast to work as ever was hitched. H. WILLIAMSON. *Chester Co., Pa.*

Notes about the West—III.

Prairie Farming—Want of Water and Timber—Hedge and Wire Fences—Profits of Farming.

We have already shown that a new prairie farm may be brought under profitable culture with but little labor and expense, as compared with that required for one located in a wooded country. The Prairies possess other important advantages than those we have enumerated, but we propose now to speak of some of the disadvantages with which the farmer on the open prairie has to contend. The great objection, peculiar to a prairie country, and which will at once strike the eye of an eastern man most forcibly, consists in the absence of wood, water and stone, materials so essential for comfort, for building, fuel and fencing. This is a serious disadvantage, and were it not more than counterbalanced by the advantages to which we have alluded, would prove an insuperable obstacle to the settlement of the Prairies.

Water.—At a distance from streams, the main reliance for water, both for domestic purposes and for cattle, must be upon wells, which are expensive and inconvenient for stock, as it must be mostly drawn by hand. We doubt not, however, that this labor will ere long be saved by the use of wind-power, as it can hardly be possible but that some of the numerous contrivances patented for this purpose within two or three years past, will, when brought into use, be found fully adequate to the purpose. Good water is usually obtained by digging from 20 to 40 feet. On many farms, water may be supplied for stock, by properly ditching the sloughs, an improvement greatly to be desired on some farms which we visited.

Buildings, Fences and Fuel.—All the materials for building, fencing and fuel, must, at least for the present, be carted a greater or less distance; but the numerous railroads now in operation and in process of construction, are bringing these materials yearly nearer and nearer to every township; and the necessary carting, after providing for the first season, may mostly be done in the winter, when there is little else for the men and teams to do. The timber necessary for the cheap but comfortable frame houses of the new settlers, may be procured at the nearest railroad depot, at a reasonable rate; and stone are but little used, as good cellars are made by plastering cement on the bottom and sides of the excavation. Little timber has as yet been required for barns, they being rarely seen on the prairies—a defect as injurious to the interests of the farmer, as it is cruel to the poor dumb beasts who have to spend the winter where the mercury falls to twenty or more degrees below zero, with no other shelter than that afforded by the numerous stacks of hay and straw. For fuel the main reliance must be upon coal, which will be abundant when the demand for it is such as to warrant the opening and working of more coal beds.

Osage Orange Hedges.—For fencing, great reliance is placed on the Osage Orange hedge We saw many miles of it, one, two and three years old, and took some pains to ascertain the opinions of the owners respecting it. Judging from the appearance of the hedges, we anticipated unfavorable replies to our inquiries in relation to its value, as we saw very little that would serve as a protection from cattle. Most of it was of very uneven growth and full of gaps, presenting any thing but a flattering aspect to the eye. But to our surprise, the owners of these unpromising looking hedges, without exception, assured us of their entire confidence in the Osage Orange as a hedge plant, and of their belief that it would in time supersede all other material for fencing. It has proved itself, by surviving without material injury, the past two winters of extraordinary severity, sufficiently hardy. The bad condition of most that came under our notice, was attributed entirely to want of protection from cattle and care in cultivation. The plants (seedlings of one year) are mostly set out by those who grow them from the seed, at a specified price per rod or mile. They then, to make a good fence, require not only protection from all domestic animals, but careful culture and trimming for three or four years; but this protection and culture they seemed rarely to have received, the excuse being that it was required at a season when other labors of the farm were so pressing that the necessary attention could not be given to it. We confess to some doubts whether hedges of any kind will ever become popular and useful in this country, as they require more care and attention than our farmers can, as a general thing, be induced to bestow upon them.

Wire Fences.—In a tour through Scott and Clinton counties, Iowa, we noticed that wire was used for fencing to a considerable extent, and seemed to be very much liked. It was mostly built in a very cheap manner, but four wires being used, with the posts from thirty to fifty feet apart. We saw no wire fence in Illinois, but since our return, have seen in the papers a letter from Mr. D. Richards of Sterling, Whiteside county, in which he says that fifty tons of wire have been sold in that town for fencing, the present season, and that much more would have been sold, could it have been procured. We copy from Mr. R.'s letter, his description of the manner in which wire fence is built in that vicinity:

"We use No. 9 wire, and set the posts 30 feet apart, and every 40 rods set an anchor-post firmly braced; attach the wire to the anchor-post and run out the 40 rods, placing them on the ground close to the foot of the posts, so that they may not get tangled. Hitch the lower wire to the hind axletree of the wagon and start ahead. If the wire breaks, back up, twist together, and start again, and keep doing so until you have broken it wherever there is a flaw or it is cracked, as it is better to break it now than to have the cattle do it after it is in the fence; and then it is doubtful whether one team can pull a good quality of No. 9 annealed wire apart, but it will stretch in 40 rods, four or five feet, and contract when the team has done drawing. Now your wire is ready to put into the fence, and you raise it up to the desired hight on the post and drive a staple to hold it there, but do not drive the staple quite up to the wire, as you want it to slide through pretty freely. When your staples are all driven and you come to the anchor-post, the best and most economical way of tightening is by means of a wooden pin. Bore a 1½ inch hole through your post, and square said hole in a few inches. Make a pin with a square on one end, the other end to fit nearly, when driven into the hole in the post; put the rounded part of the pin in the post, attach your wire to it by means of a small gimlet-hole, and then with a wooden crank that you can use for all your fence, turn up said wire until it is not only tight, but you may stretch it a foot or eighteen inches; and when the square of the pin is right with the mortise in the post, drive the pin into the post and take off your crank, and you wire is fast.

There are miles of such fence in our county, where the wire is drawn just like a violin string, that has stood through the violent cold the past winter with not a wire broken.

The staples are usually made here with a simple machine, by which any farmer can make 1,000 per hour out of the same wire, and they will drive into the hardest oak posts without a hole."

Profits of Prairie Farming.—A respected correspondent sends us the following comment on our Notes No. II:

Your account of prairie farming is flattering. To get rich with such crops, so easily grown and selling at such high prices, would seem to be the work of a very few years for an industrious prairie farmer. In the months of June and July the prairies are charming, seen for the first time, and the promise of easily acquired independence and wealth by the cultivator, is often demonstrated to be sound corn, by figures that are said not to lie. Many a snug fortune has been ciphered out as plainly as need be, from prairie farming, for the last thirty years. Numbers, now counting millions,

have been engaged in prairie cultivation for years without having reduced the price of farm products. How has this happened? Corn can be raised, it is said, at from five to ten cents per bushel, and wheat perhaps for twice that sum. How has it happened that the agriculturists of Illinois, between the years 1840 and 1850, earned less per capita than those of several other States not blessed with the absence of trees? You are aware that for the last few years the prairie regions have had poured into them such a tide of wealth, *earned elsewhere*, that it would have enriched any country. How many hundreds of millions of dollars have been carried thither to build railroads and cities, and to open farms, since 1850, who shall be able to compute? They have been the favorite field for investment from many of the richest portions of the world, until the bubble of speculation has become enormous. Permit me to record the opinion that, within five years, farms all through the prairie region, will be on sale for much less than the cost of their improvements; and that at no future day within fifty years will wild farming lands on the prairies sell as high, on an average, as during the present season of land speculation. GREYBEARD.

In reply to the query as to how it has happened that the "millions" who have gone west, have not reduced the price of farm products, if the prairies can be cultivated with the facility we have represented, it is, we think, sufficient to say that a large portion of these "millions" are to be found, not employed in the cultivation of the prairies, but in the construction of towns, railroads, canals, &c. They have been consumers, and not producers of food.

From "1840 to 1850," the prairie farmer had little inducement to labor. Although he might raise four bushels of wheat or corn, or four pounds of beef or pork, as cheaply as the eastern farmer could raise one, yet the one bushel or pound at the east brought the most money. During much of this time, the interior prairie farmer could not sell one of these products at his home for cash at any price, and the cost of transporting them to a cash market was in many instances nearly equal to their entire cash value. But now, by the aid of the millions of money and men that have gone west, railroads have been opened, and cash markets, whose rates are daily regulated by the prices in New-York, are brought within the reach of a large portion of the farmers of Illinois. Then the products of the farm were literally a drug. Now, they sell as readily, and at as fair a profit on their cost, as in any other part of the country.

"To get rich," by farming or any mechanical or professional employment, is not, in these days, so very easy a matter. But what we maintain is, that farming, whether on the prairies or at the east, affords as inviting a field for the accumulation of that competency which all men so naturally desire, as any other industrial or professional pursuit. But the question now under consideration is confined to prairie farming, and we have shown in a previous number, that it can be made profitable. That it has been made profitable, we had abundant evidence in our late tour, and could fill columns of our paper with individual instances, but will now only refer to a case or two. In one of our drives on the prairie, we noticed a particularly well fenced and well cultivated farm, with a commodious farm-house and a snug cottage for the farmer's laborers, both situated in a beautiful grove. On reaching the house, and observing the farmer quietly seated on his piazza, for it was about sundown, we drove up to the gate, and entered into conversation with him. In answer to our inquiries, he informed us that he came to the west fifteen years ago, with no other property than that which consisted of a sound mind in a healthy body—that after working by the month in one of the chief towns for three years, he was enabled to commence for himself. Twelve years ago he bought a portion of the farm he now occupies, at $5 per acre. His subsequent purchases cost him $12 per acre. He now has 400 acres of as fine land as one could desire, well stocked and fenced, and under profitable cultivation, with good buildings and other appurtenances. And all paid for—the result of fifteen year's labor, without a cent of capital to begin with. He not only farms well, but manages his affairs discreetly, as any one must do to accumulate an independence. What he has done may be accomplished by any other equally intelligent and industrious farmer. It should be remembered that most of the new settlers who have been long on the prairies, had but little if any capital to begin with, and that what they have accomplished, has been the result mainly of their own industry; and we were assured by a very worthy gentleman who removed from New-Jersey twenty years since to a prairie farm, that in all that time he had never known to exceed four or five emigrants, among all his extensive acquaintance, who had failed to "make money by farming," and the failure, in the cases of the persons alluded to, arose solely from their inefficiency.

The prophecy of "Graybeard" may prove true. We have as little faith as he has, in "land speculations." Not one in twenty prove profitable to those engaged in them, while all such speculations, whether in town lots or farm lands, are a serious injury to the country, greatly retarding as they do the growth of cities and the settlement and improvement of the country.

Swine.

Last winter I made some inquiries through the Country Gentleman, concerning a sow that had lost the use of her legs suddenly on being turned out on the ground, after having been kept in the pen for some time. This spring I have had two more affected the same way, and others in the neighborhood are similarly affected. I have heard much said about the stoppage of the holes in the legs of hogs; having never read anything about it in works written on the hog, I thought probably it was not so necessary that these should be kept open as some supposed; but I now feel satisfied that the stoppages of these holes was the cause of my hogs becoming helpless, and that it is necessary to the health of the hog that these should be kept open and discharging.

On examining the fore-legs of a hog, several small holes may be seen on the inside of the hinder part of the knee; from these, in a healthy hog, exudes a moisture; whenever these are found to be closed and dry, the hog will not be in a healthy thrifty state. I find it a good thing to take strong soap-suds and a corncob and rub the legs well. If any one can tell me the cause of the stoppage of this discharge, and a better remedy, I shall feel obliged. Also, the best mode of rearing pigs and their management so as to keep them from getting scurvy or the scours. Some say pigs will never do well unless allowed to run on the ground, yet the handsomest pigs I have seen this spring had been kept in the pen on a stone floor since they were pigged. J. W. LEQUEAR. *Frenchtown, N. J.*

Cure for Ringbone.

MESSRS EDITORS—I notice an inquiry for a cure for ringbone. I had a four year old colt that became very lame with one, and after trying various remedies without any benefit, I tried burning. I took a hot iron and laid it on until it was well burnt. After the burn got well, I found a sound and useful horse with the exception of a small enlargement. AARON MORRIS. *Steuben Co., N Y.*

Cooked or Uncooked Food for Swine.

Accurate and carefully conducted trials or experiments will, sooner or later, determine the practical value of a newly introduced farm implement, whether it be a patented churn or a grain harvester; there is something tangible about these things that both the eye and the judgment can take cognisance of. So, too, the practical value of a new variety of potato can soon be tested, whether it is a rohan or a *dioscorea*. Two or more neighboring farmers will generally come to the same conclusions in regard to these matters; so in regard to numerous other matters connected with rural affairs.

But when we come to compare apparently sound and reasonable *theory* in regard to that important branch of agriculture—animal nutrition, with facts derived from the carefully conducted experiments of different farmers in feeding fattening swine, we at once meet with discrepancies and contradictions that we can neither fully reconcile or explain.

Taking one side of the question, the feeding of uncooked food as being the best and most economical method, and it completely upsets some of our long cherished and preconceived notions in the economy of fattening hogs. The pork business is one of vast pecuniary interest to our country, and whether a bushel of corn makes 16¼ lbs. of pork, or only 5¾ lbs, as per Mr. Clay's experiment (as reported in the Co. Gent. of 2d of April,) it will readily be seen that it would make a difference of millions of dollars in the money value of the corn annually fed to the hogs of this country.

Theory and the general practice of farmers, seem clearly to point out the economy of cooking the food for fattening, and hundreds of reported experiments go to sustain both the theory and practice of cooking. But it is equally true that other experiments prove the exact converse of this. How are we to reconcile these discrepancies? Without attempting to decide the question pro or con, we will give the theory in favor of cooking and the results of cooking, and per contra, and leave the decision of the question to our readers.

Said the late Prof. Norton:—"The state in which food is given, has an important bearing on the effect which it produces in sustaining or fattening an animal. Cooked food in various forms, is found of great value in feeding. This is especially true of many roots, as potatoes, carrots, &c., also of *every kind of meal*, of pumpkins, squashes, apples, &c. When cooked, the animal eats its food more readily, and a small quantity goes further. A small portion of food which an animal can at once eat, digest, and make into its own bones, muscle and fat, is worth more than a large quantity of the same kind which it can only eat with difficulty, and digest slowly."

The above views seem to be founded on correct physiological principles.

In our issue of 23d of April, in a well written article by C. T. Alvord of Vt., on "Chemistry and Agriculture," Mr. A. takes the same or similar views on cooking food for fattening animals, that are expressed by Prof. N.

In the Co. Gent. of April 2d, is published some account of Mr. Samuel H. Clay's experiments in feeding boiled corn, cooked meal, and dry shelled corn to swine.

"The results of Mr. C.'s experiments, confirmed as they are by those of others, show that the grinding of corn into meal, and the cooking of the latter will make one bushel of corn produce more pork* than two would do, and nearly as much as three would if fed whole and uncooked.

"The results of Mr. Clay's experiments show that the number of pounds of pork for each bushel of corn was as follows:

When fed in the form of	boiled corn,	----	14½ lbs.
do do	cooked meal,	---	16½ "
do do	dry corn,	-------	5¾ " "

We feel no disposition to call in question the accuracy of the above detailed experiments or figures, because we have read many similar experiments in regard to the advantages of cooking the food usually given to fattening swine, over that of raw or uncooked, and we must confess our prejudices have been strongly in favor of cooking by boiling or steaming the roots, apples and meal, or of scalding it before fed to our porkers. But whatever our prejudices or practices have been, we feel it our duty to give the other side of the question, because facts, the deductions of carefully conducted experiments, show (by weights and measures) exactly opposite results.

The first experiment we shall refer to is that of Jos. How, Esq., of Methuen, Mass. His experiments are reported in the Essex Co. Transactions for 1848—in which he gives the details of feeding five pigs from the 25th of August till 28th of November, changing the food several times during the trial, and weighing the pigs at each change of feed. He says:

"That there should be no mistake in regard to the above experiments, I have fed them nearly all the time myself, and weighed them myself, and the result was in favor of *uncooked meal*."

In Flint's Agriculture of Mass., 1855, Albert Montague of Sunderland, gives the result of an experiment in feeding swine with cooked and uncooked food:

"The meal cooked and uncooked, was alike; one-half corn, one-fourth oats, and one-fourth broom seed. I cooked the meal by stirring it into boiling water and letting it boil from thirty to forty minutes, by which time it would swell to three times its capacity, before boiling. The pigs selected were all doing well upon uncooked food. I put four in two pens, side by side; weighed them four different times; kept an correct account of their weight at each weighing, and weighed the same hour of the day each time. I fed two of them with cooked meal four weeks, and they were not so heavy by eleven pounds as at the time I commenced. They were weighed twice during the time. They ate four bushels of meal. I fed eight and one-fourth bushels of meal, uncooked, to the others, and they gained eighty-two pounds. I then fed the last named pigs three and one-half bushels of cooked meal, and in three weeks they lost four pounds. I fed five and a half bushels of raw meal to those first fed, on cooked food, and in three weeks they gained sixty-one pounds. I think this proves conclusively that we cannot fatten swine, with profit, on cooked food. Had my pigs never had any meal but what had been cooked, I presume they might have improved a little upon it; but taking them from uncooked and putting them upon cooked food, they did not eat quite so freely at first as they otherwise might—hence a loss.

"But when we remember that even a hog cannot be so *hoggish* as to more than fill himself, and one quart of cooked meal would fill as much as three quarts of uncooked meal, we can easily see that a pig, fed on uncooked meal, would eat nearly three or quite three times the value of meal, compared with the one fed on cooked food—providing cooking did not increase the value one-third, then a pig would not be able to eat enough to fatten readily, and it must take a certain amount of food to support life, whether cooked or uncooked. Taking swine from uncooked food and putting them upon cooked food, in both cases, they lost in weight; but, on the other hand, taking them from cooked food, and giving them uncooked food there was a fair gain."

In a discussion at a meeting of the Hillsboro Ag. Society as reported in the Granite Farmer, Feb. 25, 1854, A. M. Cleaves said "that he knew of 200 swine kept

* Live Weight.

at the same time by the same owner; a part were fed on raw meal and water, and a part on fermented food, having the same quantity of meal in its composition. Those fed on the uncooked food did much the best." Col. Tyler, of Pelham, said—"A man in Pelham, now deceased, who raised very fine hogs, used to put his corn meal in one end of the trough and water in the other. The hogs mixed to suit their tastes."

We know a farmer, who usually keeps some eight or ten cows, and several hogs, besides pigs. In one trough he keeps a supply of dry Indian meal, in another the whey, skimmed milk, &c., is turned—and the hogs help themselves, whenever dry or hungry. He has followed this method for several years, believing it the best and most economical way of feeding and fattening his hogs.

In the Co Gent. of the 23d April, W. A. H. gives his experiment in fattening pigs, fed entirely on raw meal, sour milk and cold water; obtaining over twenty-three pounds of dressed pork for a bushel of corn fed, realizing two dollars per bushel for his corn. The statesment of Mr. H. can be fully relied upon.

It is generally supposed that cooked food is more nutritious than uncooked. The object of cooking is to render the food more readily assimilable, or, in other words, easier of digestion. From some of the statements we have brought forward, they seem, at least, to cast a shadow of doubt over the economy of cooking Indian meal for fattening swine.

We have not within our reach at this time, enough of reliable experiments in reference to the cooking of potatoes, carrots, turnips, and other roots, to throw much light upon the subject, and can now only refer to some experiments reported in the *Irish Farmer's Gazette*, some three years ago, on uncooked ruta bagas:

"Eight hogs were selected and divided in to two lots, as evenly as could be, and put up to fatten on the 27th of November. Each lot was fed regularly three times a day, having each 12 lbs. of bran and barley meal, the only difference being that one lot had steamed ruta bagas, and the other pulped (grated, raw) ruta bagas. The experiment was continued thirty-nine days; the lot having *cooked* food, eat 468 lbs. of bran, &c., and 10,920 lbs. of ruta bagas, and increased 103 lbs., while the lot having *uncooked* food, eat 468 lbs. of bran, &c., and only 5,460 lbs. of ruta bagas, and gained 110 lbs. It will be seen that the lot with cooked food eat twice as much ruta bagas as the lot having uncooked, and at the same time did not gain so much in weight by seven pounds."

We have cited the foregoing reports of experiments, not, however, with the idea of casting much light upon the "vexed question" of cooked and uncooked food for fattening swine, but rather for the purpose of calling the particular attention of farmers to the importance of experimenting for themselves in the important business of converting their apples, roots, potatoes, corn, and other grains, &c., into pork. The whole thing is a matter of dollar and cents, and one that makes quite a difference in the "profit or loss" in srtiking the balance sheet of the account, whether the farmer realizes but 5½ lbs., live weight, of pork from a bushel of corn, as stated by Mr. Clay, or obtains over 23 lbs. of dressed pork, as given by W. A. H.

The experiments we have quoted, seem generally to have been conducted with care and exactness. But when we come to inquire of different farmers as to the amount of pork a bushel of corn will make—we mostly get opinions, and not the results of actual trials. In this matter, we find that there are others besides the Yankees, that *guess*.

Several years since, the Commissioner of Patents sent a circular to various parts of the United States, in which he proposed this question, among others,—"How many pounds of meat will one hundred pounds of corn yield?" Comparatively few of the responses definitely answer this particular question. But those given, vary from eight to forty pounds. If in any instance 100 lbs. of corn (nearly two bushels) will give but eight pounds of po k, or but four pounds for a bushel, raising pork under such circumstances is a small business.

The Commissioner, in a note appended to the 301st page of the Report (for 1851,) expresses his own opinion that "one hundred pounds of corn meal ought to produce twenty-five pounds of pork," and he adds that "three and a half pounds of meal gave Mr. Ellsworth, former Commissioner of Patents, a pound of pork." This last would be twenty-eight and four-sevenths pounds of pork to one hundred pounds of meal.

It is well known that there is a great difference in the breeds or varieties of hogs, and individuals of the same litters, in their capacity of taking on "flesh and fat" from the same amount of food, and under the same circumstances, though we are not aware of there being so great a difference in porkers as in individuals of the genus man. As far as our knowledge extends, Calvin Edson and Daniel Lambert were the extremes—one was a living skeleton, the other a mass of human fat and oil.

"Many farmers have found, that on the same amount and kind of food some hogs will gain much faster than others; that some will become fat on uncooked vegetable food, as raw apples, while others will require grain or meal to bring them to a slaughtering condition; that some will keep in good order, and thrive on clover or grass only, while others can only live on such fare; that in some the tendency to fatten is so great, that it is necessary to keep them on very low diet to insure their breeding."

A judicious selection of breeders, and care in breeding, will undoubtedly have much to do in making the raising of pork profitable or otherwise.

My Milk Yard.

MESSRS. EDITORS—My milk yard covers about one acre of ground, oblong east and west—with a good spring on the northeast corner, and a cheap but good house over it, where I cool my milk and prepare it for market. A good stream of water from the spring and swamp runs through the northwest corner, which affords plenty of good fresh water for my cows at all times.

The south side is a row of stanchions for my cows, with a shed to cover all, so that in storms we keep dry while milking. The stanchions are seven feet from the wall, leaving room for a man to pass in front of the cows with a hand-cart, to feed the cows grass or cornstalks, and a ditch behind the cows leading all the urine and liquid manure to a large cistern in the southwest corner of the yard.

In the center of the yard is a cheap shed, 50 by 15 feet, for manure. In the spring I go into the swamp and cut large bogs, and make a bog fence all around just under the edge of this shed, so that the manure will not spread nor the cattle get over it. I spread a layer of bogs of muck on the bottom, when it is ready for the reception of the manure from the cows, old leaves, refuse straw, weeds, muck, lime, ashes, plaster, &c., with an occasional soaking of liquid manure from the cistern. In this way I have every spring a pile of manure worth a *small fortune*, where I should have realized not one-twentieth part by turning my cattle to grass. The cows are kept in the stanchions over night; then their dung is all in a pile, so it is but little labor to transfer it to the compost heap, and I am not afraid of the cattle hurting or hooking each other during the night. The stiller we keep them the less they eat to keep them in good condition.

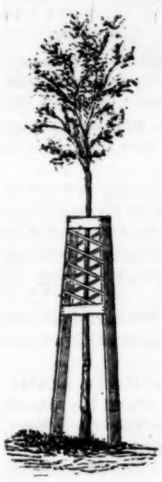
I raise most of my cows, oxen and horses, and find by turning them into my wood lots, swamps, and the lot too stony to till or mow, I can raise them and not feel it half as much as to pay $40, $50 or $60 for cows, or or $160 for a yoke of oxen, or $300 for a pair of *good* horses, and I will keep none but the best, for I find that good stock eat no more than poor ones, and are much more profitable. AN EMPIRE STATE FARMER.

Street Trees.

There is nothing that relieves the dullness of a formal row of houses, so well as a line of fine, green, luxuriant shade trees; and nothing gives a more beautiful and refreshing appearance to any town or village, than the simple and cheap adornment of foliage. Those cities in our country, which are famed for their beauty, owe more than nine-tenths of this beauty to their elms, maples, and other shade trees. Remove all these from such a city as New-Haven, for example, and it would become bald, meagre, and spiritless.

A great many street trees are planted, which perish by midsummer. There is a special cause for this, besides the ordinary causes of bad transplanting and the want of cultivation and mulching, so common to all newly-moved trees. This cause is the rubbing of cattle, and occasionally their assaults by browsing. Cattle should never run in the streets, as they do much more damage than the value of their pasture; but there we find them, and we must guard our trees accordingly. There is not probably one tree in twenty that will survive the effects of their constant rubbing, even if such trees have been set out in the best manner, so well as to be certain of all living if no cattle approached them.

Those, therefore, who have set out street trees the present year, who have done the work well, have witnessed the good progress so far, and who flatter themselves that they will endure the inflictions of cattle without any protection about them, should at once discard this erroneous notion, and provide immediately a structure to shield them. After trying several modes, we find none equal to that shown in the annexed cut, neither in cheapness nor in neat appearance. It is



well known to some of our readers, and consists, first, of two stout pieces of board, about five inches wide, and eight or nine feet long, which are inserted with the lower ends a foot and a half into the earth, and nearly upright or a little inclined towards the tree on each side. These are connected by four cross-boards nailed on horizontally, as shown in the figure; and the intermediate space has strips of common lath nailed on at intervals of three or four inches. These strips parallel with each other, but not quite horizontal; and being placed at opposite inclinations on the opposite sides of the structure, give a neat lattice-like appearance. The long upright pieces will be strong enough if of stout fence-boards; but would be more secure if inch-and-a-half plank. They are most easily set before the hole is filled; but may be inserted afterwards by partially hewing them sharp, and driving them into crowbar holes. If there is any danger from sheep, the lath may be nailed on the whole space, so as to enclose the tree from top to bottom.

Street trees cannot be easily cultivated, and must therefore be carefully, widely, and copiously mulched. The soil is liable to become trodden hard, or else covered with a growth of grass and weeds. Either will be very detrimental to the success and growth of the tree. A good mulching will keep the grass and weeds down, and prevent the surface from becoming dry and hard. As usually performed, a little conical pile is placed around the foot of the trunk, and does not cover a twentieth part of the surface required. It is true, the roots may have been cut very short in digging up the tree, so that a hole two feet in diameter will receive them all; but it must be remembered that if the trees grow as they should, the roots will soon extend two feet more on *each* side, making the circle *six* feet —and add to this, that weeds and grass generally have roots at least two feet long, *which run in towards the tree*, it will be perceived that the mulched ring, to have its full effect, should be not less than about *ten feet* in diameter, before the close of the first season's growth. It is usually made but a foot or two, the young roots shooting out far beyond its outer border, and the mulching is therefore about as useful as it would be to pour a pail of water on the tail of a thirsty horse in order to give him drink.

Wolf Teeth in Horses.

Eds. Country Gentleman—You ask for experience in reference to wolf teeth in horses.

Why such teeth affect the eyes I know not; neither did I ever see any one who pretended to give any reason, though I have asked the most experienced and skillful dental surgeons. But that two small, sharp teeth, called in common parlance wolf teeth, frequently grow one on each side of the upper jaw of the horse, just in front of the molars, is a fact known to all conversant with young horses; and that such teeth do injure the eyes I have no question. My father raised some blood horses, and I can remember when quite a boy, seeing them knocking out these teeth from the colts. Although the eyes recovered soon after the teeth were out, I could see no reason for it, and thought it an absurd custom. When old enough to take a more practical interest, I thought it must be the bleeding occasioned by extracting the teeth that was beneficial; but I soon found by practical experience, that bleeding would not cure the eyes while these teeth remained in. I have known, I should think, as many as thirty cases. I never knew them come in colts younger than two or more than six years old. Horses more frequently, though mares sometimes have them. I have noticed one eye of one of my young horses becoming sore, and found quite a large wolf tooth on that side of the mouth, while the tooth on the other side would be but just making its appearance, and the eye on that side quite clear. I have known some cases where but one tooth ever came, but in most instances where one appears, the other will come shortly. I have had three cases among my own horses the past spring, all of which recovered soon after the teeth were out. And I do not now recollect an instance where the teeth were extracted soon after the eyes became sore, that they did not recover. They are best extracted with forceps. Wm. H. Ladd. *Richmond, O., 7 mo 6, 1857.*

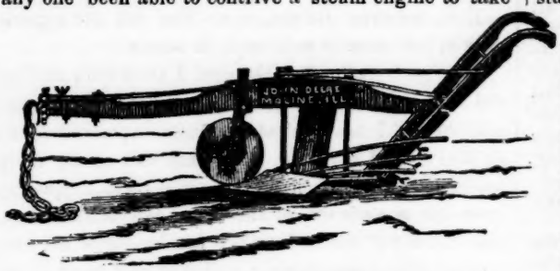
A New Butter-Worker.

Messrs. Editors—I wish to inform you that I have now in operation in our Society, a Patent Butter Worker, which gives full and perfect satisfaction to all who have used it or seen it in operation. It is not by a combination of rollers, which destroy the grain of the butter, and make it salvy and soft, but my machine will work 300 lbs. per hour, making it perfectly free from milk or brine. It is perfectly simple in construction, easy to be cleaned and scalded, and the most delicate woman can operate it with perfect ease. I have take measures to secure a patent, and if the farmer's wife who made the inquiry, will send me her order with the amount of butter she designs to work at a time, I will furnish the machine at a reasonable price. Geo. B Price, Patentee. *Albany, (Shaker box,) N. Y.*

Notes about the West—IV.

Plows—Plow Factories—Corn Planters—New Wheat Drill.

One of the advantages which the prairie farmer possesses over his eastern brethren, is found in the peculiar adaptation of his land to the use of labor-saving machinery. Indeed, without its aid, the large crops of grain could not be harvested, or the necessary amount of hay secured to sustain through the winter the numerous and extensive herds which find rich and free pasturage through the summer on the open prairies. As yet no machine or implement has been found to supersede the plow in the preparation of the soil, nor has any one been able to contrive a steam engine to take

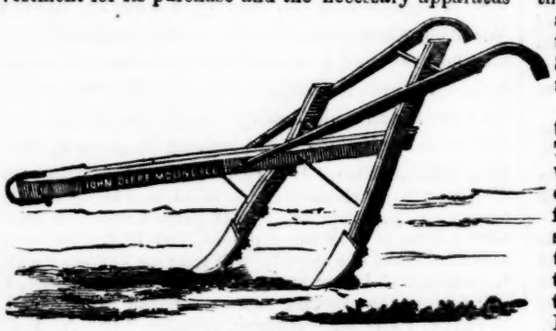


TWO HORSE ROD BREAKER.

the place of the horse or ox as a motive power. That steam can be applied to plowing, has already been abundantly shown in England; but whether it can be used *profitably* is another question. The price for breaking up the prairie is $3.00 per acre, and the farmer, with his own plow and team can do it at a much less cost; and after the soil is once brought into culti-

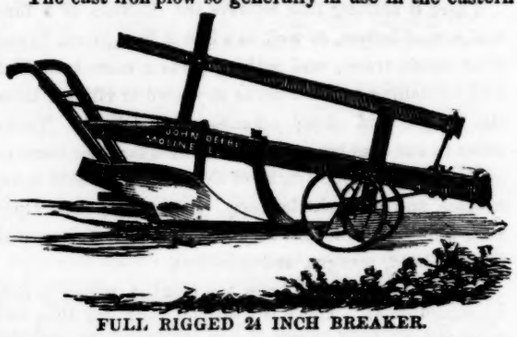
IMPROVED CLIPPER.

vation, a good span of horses will plow from two to three acres per day, as we were assured by several good farmers—thus reducing the expense, as every farmer should keep horses or oxen enough to do his own work, to about $1.00 per acre. That a steam engine can be made to do the work at a cheaper rate, when the investment for its purchase and the necessary apparatus is considered, we have no very sanguine anticipations.



DOULLE SHOVEL PLOW.

The cast iron plow so generally in use in the eastern



FULL RIGGED 24 INCH BREAKER.

states, was found not to work well in prairie soil, because it would not *scour;* and several extensive manufactories of plows peculiarly adapted to the soil, have been established in Illinois. One of the oldest of these, is that of Mr. JOHN DEREE, at Moline, a thriving town on the east bank of the Mississippi, opposite the upper end of Rock island, the water power used being furnished by the east branch of the river. We spent an hour in examining this establishment with Mr. D.'s superintendent, Mr. D. being absent. From a small beginning several years since, Mr. D. has added from year to year to his works, until they now form one of the most complete and extensive in the country, devoted exclusively to this branch of business. Cuts of several of his plows are given on this page. These are all made of cast steel, and perfectly polished before they are sent out, and are kept bright by use, so that no soil adheres to them. To show the extent of Mr. Deere's manufactures, we may state that during the past year he employed an average of sixty-five men through the year—worked up 50 tons cast steel, forty tons German steel, 100 tons Pittsburgh steel, seventy-five tons castings, two hundred tons wrought iron, eight tons malleable castings in clevises, &c., 100,000 plow bolts, and 200,000 feet of oak plank, burning 500 tons Illinois bituminous coal, 75 tons Lehigh coal, and 100 tons coke.

The least number of plows made in any one week, was 56—the highest number, 653—averaging 268 per week, and making a total of 13,400 in a year of fifty weeks. Of these, 800 were large breakers, cutting 18 to 24 inches—1,300 small breakers, cutting 12 to 16 inches—9,000 stubble plows, cutting 12 to 14 inches—1,000 corn plows—300 Michigan double plows, and 100 double and single shovel plows and cultivators.

Messrs. Naylor & Co., the celebrated steel manufacturers of Birmingham, England, from whom Mr. Deere procures all his steel, &c. which he has to import, recently ordered three of Mr. D.'s plows of different patterns, which have been forwarded to England, where we doubt not they will attract great attention. In conclusion, we beg leave to suggest to Mr. D. that two or three of his plows—the large breaker and the double shovel especially—would be a very valuable addition to the AGRICULTURAL MUSEUM of the New-York State Ag. Society, and for which the Society would no doubt gladly vote him their thanks.

At Rock Island we visited another Plow manufactory erected the last year by Messrs. BUFORD & TATE, under the direction of the latter gentleman, who has been long engaged in the business and understands it thoroughly. It is one of the most perfect manufacuring esiablishments we have ever seen, all its arrangements being admirably contrived to carry forward the work from one machine to another, and from one set of men to another, until the plows are delivered complete in the paint-shop. It is capable of turning out from 12,000 to 15,000 plows a year.

NEW WHEAT DRILL.—At Rock Island we examined a wheat drill, invented by L. O. ROCKFORD of that place, and for which he has applied for a patent. Winter wheat is so generally winter-killed in Northern Illinois and Wisconsin, or at least in such parts of it as we visited, that its culture has been almost given up. This drill is intended to prevent this injury, by placing the seed in rows eight inches apart, with ridges about four inches high between the rows. These ridges it is thought will protect the roots of the plants, and thus save the wheat from being winter-killed. It is worthy of a careful trial, and if it equals Mr. R'.s expectations, it will be of immense value to prairie farmers. Mr. R. is also the inventor and patentee of the "Prairie Razor Reaper and Mower," of which he informed us he had made aabout 200, which had worked to the satisfaction of those who had used them.

BROWN'S CORN PLANTER.—We saw one of these in operation on Buffalo Prairie. It is drawn by two horses, and requires two men to work it, who both ride on the machine—one to drive and one to manage the lever by means of which the corn is deposited in the ground at the points desired. It is said that 15 to 20 acres a day may be planted with it. G. W. BROWN, Galesburg, Ill., is the manufacturer.

Illustrated Annual Register for 1858.

The 4th no. of our ANNUAL REGISTER, for 1858, is now ready. It has been prepared with greater care and expense than either of the previous numbers—includes a greater variety of subjects and innumerable brief but valuable hints, both for the Farm, the Orchard, the Garden and the Housewife, as well as for all who propose to build Houses, or Plan or Improve their Grounds. For summary of contents see advertisement in another column.

☞ Price 25 cents—per Dozen, $2.00—postage prepaid when sent by mail.

MASSACHUSETTS COUNTY FAIRS.

Barnstable,	Barnstable,	October 7, 8.
Bristol,	Fall River,	Sept. 30—Oct. 1.
Berkshire,	Pittsfield,	October 7—9.
Essex,	Newburyport,	Sept. 30—Oct. 1.
Franklin,	Greenfield,	October 1, 2.
Housatonic,	Gt. Barrington,	September 23, 24.
Hamp., Frank., and Ham.,	Northampton,	October 7, 8.
Hampshire,	Amherst,	October 14, 15.
Hampden,	Springfield,	Sept 28—Oct. 3.
Hampden East,	Palmer Depot,	October 6, 7.
Middlesex,	Concord,	September 29.
Middlesex North,	Lowell,	September 16.
Middlesex South,	Framingham	September 22, 23.
Nantucket,	Nantucket,	October 13, 14.
Norfolk,	Dedham,	September 29, 30.
Plymouth,	Bridgewater,	Sept. 30, Oct. 1.
Worcester,	Worcester,	September 23, 24.
Worcester West,	Barre,	September 17.
Worcester North,	Fitchburg,	October 2.
Worcester South,	Sturbridge,	September 30.

Agricultural Fairs for 1858.

United States, at Louisville, Kentucky, September 1—5.

American Institute, Crystal Palace, New-York, opens September 15, and continues two weeks.

Young Men's National Ag. and Mechanical Society, at Elmira, Sept. 1—5.

Springfield Horse Show, at Springfield, Sept. 30—Oct. 2.

PROVINCIAL FAIRS.

Canada East, Montreal, September 16—18.

Canada West, Brantford, September 29, October 2

HORTICULTURAL AND POMOLOGICAL.

Fruit-Growers' Society of Western New-York, at Rochester, September, 18, 19.

Ohio Pomological Society at Cincinnati, September 14—16

☞ North-western Fruit Growers' Asociation, meet at Alton, Ill., September 29.

STATE FAIRS.

Alabama,	Montgomery,	October 27—30.
California,	Stockton,	Sept. 29—Oct. 2.
Connecticut,	Bridgeport,	October 13—16.
Georgia,	Atlanta,	October 20—24.
Illinois,	Peoria,	September 21—24.
Indiana,	Indianapolis,	October 4—10.
Iowa,	Muscatine,	October 6—9.
Kentucky,	Henderson,	October 12—16.
Maine,	Bangor,	Sept. 29—Oct. 2.
Maryland,	Baltimore,	October 21—25.
Massachusetts,	Boston,	October 21—25.
Michigan,	Detroit,	Sept. 29—Oct. 3.
New-Hampshire,	Concord,	October 7—9.
New-Jersey,	New-Brunswick,	Sept. 29—Oct. 2.
New-York,	Buffalo,	October 6—9.
North Carolina,	Raleigh,	October 20—23.
Ohio,	Cincinnati,	September 15—18.
Pennsylvania,	Philadelphia,	Sept. 29—Oct. 2.
Pennsylvania, West,	Pittsburgh,	September 23—25.
Rhode Island,		
South Carolina,	Columbia,	November 10—12.
Tennessee,	Nashville,	October 12—16.
Tennessee, East,	Knoxville,	October 20—23.
Tennessee, West,	Jackson,	October 27—30.
Vermont,	Montpelier,	September 8—11.
Virginia,		October 28—31.
Virginia, Western,	Wheeling,	September 16—18.
Wisconsin,	Janesville,	Sept. 29—Oct. 2.

NEW-YORK COUNTY AND TOWN FAIRS.

Albany,	Albany,	September 15—17
Allegany,	Angelica,	October, 1, 2.
Chenango,	——,	September 22—24.
Cortland,	Homer,	September 15—17.
Delaware,	Andes,	Sept. 30—Oct, 1.
Franklin,	Malone,	September 23—25.
Jefferson,	Watertown,	September 16, 17.
Livingston,	Geneseo,	September 24, 25.
Monroe,	Rochester,	September 21—23.
Ontario,	Canandaigua,	Sept. 29—Oct. 1.
Orange,	Goshen,	Sept. 29—Oct. 1.
Orleans,	Albion,	October 1, 2.
Queens,	Jamaica,	September 24.
Rensselaer,	Lansingburgh,	September 15—17.
Saratoga,	Mechanicsville,	September 15—17.
St. Lawrence,	Canton,	September 16—18.
St. Lawrence International Ag. and Mechanical Soc'y,	Ogdensburgh,	September 9—11.
Wayne,	Lyons,	September 16—18.
Westchester,	Sing Sing,	Sept. 29—Oct. 1.
Essex,	Elizabethtown,	September 10, 11.
Palmyra Union,	Palmyra,	October 14—16.
Columbia,	Chatham 4 Cor.,	September 23—25.
Steuben,	Bath,	Sept. 30—Oct. 2.
Lewis,	Turin,	September 23, 24.
Skaneateles,	Skaneateles,	
Oswego,	Mexico,	September 16—18.
Schuyler,	Watkins,	October 1, 2.
Yates,	Penn-Yan,	October 8, 9.

NEW-HAMPSHIRE COUNTY FAIRS.

Sullivan,	Charleston,	September 23, 24.
Hillsborough,	Milford,	September 30.
Rockingham,	Exeter,	October 1, 2.

VERMONT COUNTY FAIRS.

Addison,	Middlebury,	September 23, 24.
Champlain,	Vergennes,	Sepetmber 17, 18.
Franklin,	St. Albans,	September 23, 24.
Orange,	Chelsea,	September 23, 24.
Rutland,	Rutland,	September 16, 17.

Notes in Steuben—I.

MAJOR DICKINSON'S FARM—SITUATION—CROPS—MEADOWS AND THEIR MANAGEMENT—IRRIGATION—DRAINING, SEEDING AND MANURES—PASTURES, ETC.

Hon. A. B. DICKINSON is the possessor of some five thousand acres in the town of Hornby, Steuben Co. Corning, at a distance of a few miles, is situated, as our readers are aware, on the Chemung river—just below where the Conhocton, Canisteo and Tioga unite under this name, and carry the drainage of a considerable territory, embracing portions of Steuben and Allegany in New-York, and Tioga and Potter counties in Pennsylvania, through the Susquehanna until it finally reaches the ocean at the Chesapeake. Springs on Major Dickinson's farm also find their way to the Atlantic through Seneca Lake and the St. Lawrence. And, at a distance of not many miles to the westward, other waters turn their current toward the sources of the Ohio, and after the longest and most winding course of all, at length reach the sea through the Father of Waters and the Gulf of Mexico. Corning is likewise on the line of the Erie railroad, and forms the terminus of connecting roads to Rochester and Buffalo, and of that extending up the valley of the Tioga to the mines of bituminous coal at Blossburg.

The valley of the Conhocton, nowhere apparently very wide, is generally skirted by rather abrupt acclivities, some of them under cultivation, but more still unimproved, while a few have not yet been shorn of their timber. After surmounting these hills however, one comes to a rolling and quite well farmed tableland, in soil mostly of a stony clay, and adapted for a grazing or dairy, rather than a grain-growing region. Springs are very abundant, but drainage is easily secured. The water is soft, and of good quality. Excellent wheat is grown; corn requires considerable manuring, but in the grasses, is after all to be found the real wealth of the land, and its main products appear to be fat stock, butter, cheese and wool. Skillful cultivation can also make it yield great root crops.

In GRASS Major D.'s particular "specialty" consists. He has nearly three thousand acres under his own farming. Of these, a hundred and fifty or two hundred may be in wood, or in low spots not yet drained and made productive. Six hundred are divided about as follows: In oats, 200; spring wheat 100, and winter wheat, 50; barley, 75; potatoes, 60; buckwheat 50, and turnips 40; of the other 25, a few are in peas, and the remainder in a mixture, to which we shall refer again, intended chiefly for hog pasturage. Seven hundred acres more lie in meadow. The remainder of the farm is pasture. To carry all this on, requires a degree of energy, industry and sagacity which few men manifest, whatever pursuit they follow—fewer yet, it may be, among farmers, who were they gifted more generally with a share of our host's agricultural ambition, if we may call it so, would be wealthier men and lead more confortable lives at this day. But the temperament of Major D. is such that he finds it difficult to restrain his attention even to the wide responsibilities of so large an estate; and so far as our observation extended as to his management of it, he manifests unusual skill in the adaptation to individual circumstances and purposes, of the true Science of Rural Economy—the use of the land at best advantage, both future and present—the permanent increase of its fertility at a profit to its owner.

Personal inspection of the Major's Meadows and Pastures will make us more eager to obtain a hint or two as to the causes of their productiveness,* for he has not been hay-making and grazing for upwards of 30 years, without profiting from the lessons of experience, and becoming less and less disposed to be beaten by others in the quality and quantity of his grass crops. Rather his choicest meadow is a lot of some twelve acres, of which he promises when the hay is cut and cured, to report the yield by accurate measurement and weight, for the benefit of our readers. It has not been plowed for upwards of twenty years, and Major D.'s experience convinces him that no acre can be laid off in the whole of it, which will produce less than *three and a half tons*. The rain and wind when we first saw it had beaten the grass over a little, but it was too tall and thick to suffer, and the next morning stood as straight as possible from bottom to top. We go a little way through it, spreading the tops back with our hands to make a passage. The heads of the timothy average nearly four feet high, presenting as smooth and even a surface as any grain field; just below them are the branching panicles of red-top, high enough and thick enough to make a heavy crop alone. Then a little further down stand the spikelets of blue grass,—[this may not be the genuine Kentucky blue grass, although the seed was purchased as such, and it has consequently borne the name]—then there is a considerable growth of red clover, and below all an undergrowth of white clover—so that, at the bottom, the thickness of the stalks is perfectly surprising; the different varieties, maturing at different heights, apparently do not interfere, but on the contrary brace each other up most perfectly against winds and storms, while strange as it may seem to those accustomed only to the scant meadows and pastures too universally seen, chickens could not penetrate among them, and we doubt very much whether a calf a month old would attempt it. Now, two tons is a pretty successful grass crop anywhere; double it, or nearly, and it can be imagined that the above is not an exaggerated description of the result. We doubt whether this field has its parallel; if it has, we should be pleased to hear from the owner.

Next we visit *one field of nearly one hundred and eighty acres*, which earlier in the season Major D. estimated as fully equal to the one we leave. It has not, however, been seeded down so long, and appears during the last few weeks to have grown up a little higher, with somewhat less thickness. But it is probably not more than half a ton lighter to the acre; and certainly very much exceeds, not merely in extent but in productiveness, anything within the knowledge of the writer. With the exception of the shoots from the roots of a few trees recently cut down, there is nothing to be seen across it but the waving surface of the timothy, and on nearer inspection the heads of the red-top which come just below the others. The field is *full*, close up to the the walls, and the stalks reach an even height of nearly four feet and a half—and still more in the lower part, where we pulled two but very little above their neighbors, and found them to measure *five feet and an inch*. We went together some distance through this field, and where there had been a road to the hay stacks in the spring, discovered to the chagrin of the Major a few clumps of the pernicious ox-eye daisy, the seeds of which he supposed to have been scattered by his neighbor's teams in drawing hay, but which—as he believes in the entire eradication of every weed or plant except those he wishes to grow—were by no means a pleasing surprise. Excepting these and the tree-suckers alluded to, we do not believe there was any thing on the whole 180 acres, that was not there of right. It is a beautiful sight to look, for a full mile, across such a field, and one that it would be well worth going a considerable distance to see. Lowering one's eye to the level of the grass, no boundaries were within range of vision; it stood higher than the walls and fences of the field. And the next visitor will not encounter the daisies, let him look ever so closely—Major

D. detached a force of hands and hoes that afternoon to cut off the untimely visitants.

It may be thought that this long description of a couple of meadows, is a waste of room and words, but extended as it is, the time taken in writing it is not so great as that we spent in looking at and admiring them. And if the thought occurs to any incredulous reader to "see what he can do," the following hints may assist him.

To begin with, it is a part of Major D.'s theory that the older a meadow or a pasture, properly cared for, the better the grass in quality and the greater the quantity. And he would never break up the sod, except in cases where the ground is so rough and stony that a mowing machine cannot work in it. He then plows, manures, and puts it in some crop requiring considerable cultivation, such as potatoes, other roots or corn, generally the last, picking up and removing the larger surface stones which are loosened up by the plow. In addition, he is now taking every such opportunity to turn the courses of the streams so as to enable him to irrigate all his fields at pleasure. To this process we must devote more space, as it is one little used as yet in this country, compared to what it would be, were it generally known how simply it can be accomplished.

HOW MAJOR DICKINSON IRRIGATES.

He plows a straight channel for the stream or streams he wishes to employ, and so numerous are the springs over his farm, there is some one running nearly everywhere he wants it. This channel is carried over the highest possible part of the field in a direct line; the old channel or channels are filled with stones, making in effect good underdrains, and the soil plowed over the top. The land is plowed in furrows leading from the new channel in whatever direction, straight or crooked, the surface renders necessary in order to give them a regular and moderate decline. Then the water collected by a dam above is turned on, and made to fill these furrows, by means of which it reaches every part of the field, requiring no other assistance than the supervision of one or two men with their hoes to prevent obstructions and secure its complete distribution. Major D. is extending this system to every part of his farm by degrees, and hopes ere long to be able irrigate the whole of it, at little expense either of time or labor. He has had one stream some time under control in the way specified, and the effects of the process have been of the most marked and satisfactory character. He very much increases its fertilizing nature by the following means. A small patch on which the water collects when the stream is dammed up, to the depth of a foot or two, is thoroughly harrowed up, while the water is upon it, having been previously plowed, and the turf upon it burned to ashes. The result is, that the soil is thoroughly intermingled with the water, and is deposited by it wherever it goes in a fine top-dressing like the natural washings of a stream. A quarter of an acre will thus furnish a large surface for years with a manure which will ere long render it, as Mr. D.'s experience shows, too rich for many crops, and exceedingly productive of roots, or grass, or corn. On a small patch thus treated, he has raised so heavy a crop of carrots that he scarcely dares tell the story.

DRAINING

He performs much more cheaply and he thinks as thoroughly as by the use of tile. He has several lines of stone under-drains laid, but depends mainly upon the use of a plow so contrived as to bore a channel at the desired depth below the ground, without turning up any of the soil—requiring considerable power in the team and strength of materials, but by means of a thin and sharp coulter of the requisite length, and a conical shaped attachment at the bottom, leaving a smooth burrow, which in his stiff soil he expects to last a long time. We did not see the implement, as it was in course of some repairs and improvements. We believe when thus improved it is proposed to patent it, and if it performs all that the Major's experience would lead us to suppose, it will certainly be a great acquisition to every farmer on similar soil. By its aid he has drained very largely, and he tells us very effectively.

SEEDING—PLASTER—ASHES, &C.

In seeding, our friend employs a mixture in about the following proportions: timothy 1 peck to 10 qts.; of red and white clover each one quart; and of red-top and blue grass, sufficient to make half a bushel, for one acre. This seed, like every thing else, he rolls in tar and plaster, (in the case of wheat and barley he substitutes lime.) The tar is diluted with hot water, and it is very little trouble to coat each seed thoroughly, when the plaster adheres to it, and from thus being brought into immediate contact with the seed, is thought fully as effective, as a manure, as a very much larger quantity would be if applied in any other way. A half-pint of tar in five or six gallons of hot water, we were told would coat a bushel of wheat with another of plaster or lime, and the proportions required for other seeds are probably the same.

In the subsequent management of his meadows Major D. calculates to give an average annual top-dressing of about a bushel of plaster to the acre—frequently finding it more convenient to apply double this quantity each alternate year. But his manufacture of *Ashes* deserves more particular notice. He plows up the turf along his road sides, and after a few days' drying, burns it in heaps, of which one man will attend several; they continue burning about a week, and each heap will give upwards of a hundred bushels of the ashes—a rich, dark, fine mass of burned vegetable matter, roots and tops and charred mould, the appearance of which would satisfy any one that it must be a valuable fertilizer. On the side of the road, extending for about 80 rods, a breadth of a rod or two burned last fall, had yielded upwards of 1,500 bushels, computed roughly and at a low estimate. One hundred bushels makes a good manuring for an acre of grass, and can be produced for a dollar, and spread on the field for another dollar. It is his idea that he will shortly be able to dispense at least partially with plaster, of which he now buys annually a hundred tons, substituting these ashes in their stead. We saw several heaps, the surplus of the last burning, and are convinced that they must be of the greatest value in proportion to their cost.

As an evidence in support of the general impression that the effects of plaster are derived from its faculty of absorbing ammonia from the atmosphere, Major D states that nowhere are they so plain as on exposures toward the prevailing direction of the winds. And if he applies it to fields on three sides of another which receives none, the latter will be reduced to such a degree of unproductiveness, as at least to become unprofitable for cultivation.

With a few words in reference to Major Dickinson's idea of Pastures, we must close for the present. He practices extensively, grazing and mowing from the same field—not very strange, when his pastures much of them nearly reach the average meadows of many farmers, and would perhaps half of them cut from a ton to a ton and a half to the acre. But he does not wish to rob the soil. It is good economy to leave a covering on it over winter, and not to pasture in spring till there is something to eat. What portions he mows one year he will let the stock graze the next, and he finds they select the grass here of their own accord, suffering the remainder to grow to greater length, and apparently preferring the taste of that mown the year previously. Springs of water he carries into troughs accessible to the cattle, and the surplus is stoned up in a channel or otherwise disposed of so that the cattle cannot stand in mud and water half the day.

Those who have read this paper for a year or two past, will not need to be reminded of Major D.'s antipathy to shade trees in pastures. The cattle are lying

under them, he says, all the time the sun is high, doing their eating morning and night when the dew is on the ground, and the wet grass fills them up without supplying near the nourishment or being taken in near the quantities it is when they are kept leisurely at it all the day. To coax stock, both working and fattening, as well as his human assistants, to eat all they can, is a cardinal principle in his economy. There is no danger of overloading *his* stomach, who does a good day's field work, if healthy and properly prepared food is ever so abundantly provided.

We have already hinted how cruel and murderous a disposition Major D. habitually manifests—towards the weeds. Herod did not exterminate the young children of Bethlehem with more unappeasing zeal. Neither his rail fences, nor his neat and substantial walls (of which hereafter,) does our friend desire to be overgrown with briars or berry bushes. Daisies are his detestation, and against all the host of their companion trespassers on cultivated lands, he raises an unrelenting hand,—and, it may be added, they don't like this spirit of opposition, and very generally retire defeated, one after another, until the cleanness of nearly all his fields and road-sides has become a remarkable feature in his farming. He finds the cattle and sheep very useful auxiliaries—the bushes and briars which are to be cleared away he sprinkles with salt occasionally, and they speedily receive a degree of attention from the stock, incompatible with renewed vigor another year, and generally making them weary of life in a single season.

The Apiary.

Position of an Apiary.

There is no dobut that bees, to a certain extent, will thrive anywhere, so long as they are protected from moisture and undue heat and cold. The *first hive* of which we have any record was in the carcass of a lion, (Judges, xiv: 8.) and from that time to the present, they have been found in chimneys, garrets, steeples, barns, and the last most fanciful place we have heard of was in the body of a wooden rooster which served for a weathercock upon a church in Georgia. The *best habitation*, however, is in a well made *wooden* hive, so constructed as to resist extremes of heat, cold, and dampness, and placed in the open air. It should be *near* the ground, (not more than 3 or 4 inches from it,) resting upon a platform which should extend at least 8 inches in front of the mouth of the hive. We shall give reasons for this, and endeavor to anticipate objections. The bees darting down from a great elevation, with a heavy load, readily lodge upon such a platform, and easily run to the entrance; it also enables the little creatures to stand about the door-way and guard it against intruders. Any one who has watched a hive in the spring and fall, or upon the coming up of a sudden shower in mid-summer, must have noticed how many fall short where there is only an inch or two in width for a landing place. If the hives are up one, two, or three feet from the ground, the bees are chilled, and in the spring (the most important season) hundreds of the most active bees perish. We only ask a little attention to this particular, and the fact will be so verified that we are sure the bee keeper will at once lower his hives for the sake of utility, if not humanity.

Hives should face a little to the East of South. As "early birds catch most worms," so early bees do the most work; the platform is dried sooner, and enables the workers to enter without being chilled. Again, hives should stand clear of fences, or anything which may cast a shade around the hive in the latter part of the day. It is a matter of life and death whether the bee falls into the shade or sunshine upon returning home with his load of pollen, in the months of March and April, particularly if the air is cold. If in the sunshine, the bee takes breath, recruits, and makes another trial to reach home, but if in the shade, nine times out of ten, he stays there and dies. This may seem a small matter, but where there are ten stocks I have no doubt enough bees are lost to make a swarm. I have picked up sometimes fifty in a day under one hive. If the sun can shine all around a hive it is a *good position*. It may be said that hives in a low position will be troubled with insects; such has not been my experience—even ants are kept at a distance by the vigilance of the bees.

With regard to *Bee-Houses*—it will be found that the evils resulting from heat, (even in those best ventilated,) the facility with which moths secrete themselves, the difficulty of manipulating the hives, the height of entrance from the ground, the shade cast by the house, not to say anything of the expense, will more than counterbalance any benefits which may arise from superior protection.

For *large* apiaries of one or two hundred hives, a house is out of the question. I hope yet to see apiaries on a large scale managed in the open air, and I am confident that the income from one hundred well conducted stocks, where there is good pasturage, will afford an income of *at least* $600 annually.

This however implies much attention, study, patience and perseverance. There are few places where one or two hives may not be kept, and those are in the centres of large cities and towns; but we would advise no one to commence bee-keeping with more than two hives at first, especially if he nas had but little experience.

APIS. *Whitemarsh, Penn.*

The Poultry-Yard.

Leghorn Fowls.

MESSRS. EDITORS—I confess to being a "Fowl-fancier." I took the "hen-fever" the "natural way," and have for several years experimented in a small way with most of the different varieties of domestic fowls "we read of."

Last year, however, I came across a kind that I had not seen described in the books, viz, the "Leghorns;" and as soon as convenient I procured a trio of them, and commenced the study of their peculiarities.

Of course my experience with them has not been of very long duration, but it has been long enough to convince me that they are a very valuable variety, and possess, in a high degree, the qualities most prized in fowls, viz, hardiness, early maturity, and fecundity.

I kept them last winter in a common barn, in one corner of which, in a room with an open window, they roosted, and they showed their hardiness by laying when it was cold enough to almost freeze the egg while under them. The young chicks are strong and active, and their precocity is remarkable; I have known the cockerels to crow before they were three weeks old, and the pullets will lay at four months.

The large size and brilliant color of the comb and wattle of the young cocks, with their impudent and consequential strut and swagger towards the hen, make them very attractive and amusing.

As to their laying qualities, I can only say that mine commenced in January last, and there has been no week since in which they have not laid more or less. Since the first of April, I think may Spanish have excelled them, but the Spanish are shy layers in cold weather.

The Leghorns bear confinement well, and keep themselves neat and free from vermin, if they have a chance to dust themselves; they are seldom or never inclined to set, and from the rich color of the leg and skin must make handsome poultry. There is but one objection that can be offered against them, in my opinion, and that is, that they are rather under the average size of common fowls. But if that be considered an objection, I think it more than counterbalanced by their early maturity, the compactness of their build, and the fineness of their bone and quality of flesh. They show also, in a marked degree, the sure indication of a distinct variety—i. e., "fixity of type," and are therefore deserving a place in the "books." Yours truly, T. A. D. *Chicopee, Mass., Aug.*, 1857.

The Cherry Tree—Remedy for Black Wart.

This is a valuable fruit. Of late years, however, a disease called the "black wart," which is developed on the limbs, and known to be produced by an insect which selects the soft and yielding cuticle enclosing them as a *nucleus* for its young, has tended greatly to abridge their cultivation. Many who have been extensively engaged in raising cherries for the market, and who derived a large profit from that source, have renounced the business as no longer practicable, and cut down or eradicated their trees in despair. The wart, when it first makes its appearance, is a mere slight intumescence, of a greenish color and somewhat rough surface, resembling very nearly the wart on the human skin. In a short time, however, it assumes a darkish color, and finally becomes indurated and dry. On examining it critically, its texture is found to be vascular, somewhat like a sponge, and every cell or cavity to contain an insect similar to the small maggot which infest cheese. These, in time, become winged insects, eat out of their vascular habitation, and resume the depredatory instinctive operations of their progenitors of the year before. The remedy is, however, in our opinion, very easy. It consists merely in cutting out the excrescences, or abscinding the limbs as fast as the former are developed. This is readily accomplished, and if the infected are burned, and the stumps carefully secured with wax or some other efficient protection, the health of the trees will not be injured; their fruitfulness will remain unimpaired by the operation, so far as the unmutilated branches are concerned, and no injurious effects will result if the disease is taken in its incipient stages. The same disease is common to plum trees, and the same course of treatment is recommended as in the case of the cherry. *Thoroughness* in the operation is quite indispensable to success. M. W. *Saco, Me.*

Culture of Top-Onions.

Messrs. Editors—In response to the inquiries of O. L. DeForest, in the Co. Gent. of the 2d July, permit me to say that "top onions set out this spring, will, if preserved over until the next season, produce top onions again," so long as he may choose to cultivate them properly. There are some fine ones growing in my garden that were planted last year, and permitted to remain out all winter without protection, not having suffered the least injury apparently from the extreme cold to which they were exposed.

Top onions may be cultivated for the seed bulbs in a permanent bed without replanting, for a succession of years, producing more seeds the second and perhaps in succeeding seasons, than in the first.

For this purpose select a convenient plat or border in the garden, and having properly prepared it by richly manuring and pulverizing the soil, plant the bulbs in rows one foot apart, and keep them from weeds, and the ground well stirred during the season. In the fall after gathering the seed, cut off the seed stalks and cover the bed an inch or two with well rotted manure or compost, and thus continue the culture year after year, taking care to keep them properly thinned, as they are inclined to multiply and throw up too many seed stalks after the first year.

The different varieties of the "black seed" onions may be cultivated in a similar manner, by sowing the seed the latter part of August or first part of September, taking care when the bulbs are desired to remove the seed stalks as fast as they show themselves in the spring. They will survive the winter without protection, but a good coat of manure or compost will accelerate their growth and increase the product. In applying the manure, be careful not to cover the tops of the onions, and keep them well cultivated in the spring, and in due season your labor will be rewarded by a goodly supply of early onions, though not so fine as those raised from spring sowing.

When *seed* only is desired, then onions may be cultivated precisely as the top onions, with similar results, year after year. Wm. B. Downer. *Peterboro, N. Y.*

Cure for Sweney.

Messrs. Editors—I notice an inquiry in the "Cultivator," as to what will cure the sweeney. I had a valuable horse that was badly affected with the sweeney, and after trying many remedies that were proposed to me, such as rowelling, inflating with wind, &c., all of which utterly failed, a friend gave me the following recipe:

1 ounce laudanum,
1 " camphor,
1 " spirits hartshorn,
1 " spirits turpentine,
1 " Castile soap,
3 " alcohol,
1 gill sweet oil,

which was prepared by an apothecary at a cost of only 75 cents. The affected part I had well rubbed twice a day for one week, when a perfect cure was effected. It is a certain cure, and easily tried by any one having a horse suffering from this disease. John C. Holland. *Catonsville, Md.*

Eds. Co. Gent.—In the last number of your paper is the question, what *will cure sweeney?* A few years ago I had a young horse afflicted with sweeney, and had become quite lame. I tried the usual remedies in use in the neighborhood, without any change for the better. I was receiving the Ohio Cultivator, and in that was a receipt for the cure of sweeney. I used it with perfect success. The receipt was as follows:

Cure for Sweney.—One pint of turpentine, one oz. of Spanish flies, half a pound of lard, half a pound of rosin—melt the lard and rosin together. As it cools, add the flies and turpentine.

Apply it to the affected parts, and rub well with the hand. In two or three days rub again—that will take off the hair—then rub again, and it will blister. If three applications do not cure, then continue it till it does cure. It will cure, I am confident, so much so that I would not be without the knowledge of it for the price of three good horses at least, for I have cured that many. Smith Wilson. *Hocking, O.*

How to Break a Cow of Sucking herself.

Take a stick some two or three inches in diameter, and from 2½ to 4½ feet long—the length depends on the size of the cow—the larger the cow the longer the stick. Make a mortice an inch and a half or two inches wide in each end, and put the stick between the cow's fore legs, and buckle a strap that is passed through the mortice in the stick just behind her fore legs, and fasten the other end of the stick in the same manner around her neck. Neither of the straps need be buckled very tight. H. Williamson. *Chester Co., Pa.*

Inquiries and Answers.

BONE MANURE.—Can you tell a common farmer, who knows nothing of Chemistry, what to do with the bones of his slaughtered animals? there being no such thing as a bone-crushing machine in his neighborhood. Don't tell him to dissolve them in *nitric acid*, or any other preparation *from below*, but simply how he had better use the bones instead of letting them bleach on the surface of his fields. X. *Cleves, Ohio.* [There is no process for reducing bones effectually, other than grinding, or cracking, and dissolving in sulphuric acid, that has been well established by successful experiment. Fermenting with wet ashes is imperfect, and not very economical of fertilizing material. We have been informed that fresh bones, mixed with strong horse manure, and then the whole subjected to vigorous fermentation, would reduce the bones to a pulpy mass, rendering them easily worked down and mixed with the materials of compost. We would recommend our correspondent to try this method, and when the process is completed, to mix the manure and bones, after well chopping them up, with turf, loam, or ditch scrapings, so as to make a good compost. We cannot insure success, but should it succeed, it would prove quite valuable.]

GRASS FOR LAWNS.—I wish you would inform me what the best grass for a lawn is. Also where the seed can be obtained. Likewise what the price of white clover seed is by the pint, quart, or by the pound. A. A. COLE, P. M., *Flowerville, White Co., Ind.* [A *mixture* of grasses is best for lawns, because some one or more will be green and flourishing while others may have passed the season of luxuriant growth. Some of the best grasses for this purpose, are, Red-top, June grass or Kentucky Blue-grass, Sheep's Fescue, Creeping Bent-grass, Sweet scented vernal grass, Wood Meadow-grass, &c., with a portion of White clover. J. M. Thorburn & Co., of New-York, and other seedsmen, sell a good mixture of grass seed for lawns, from three to four dollars per bushel, and white clover seed is sold from 30 to 50 cts. per lb.]

VALUE OF BLACK OATS.—I should like to be informed through the "Country Gentleman" of the value of the dark colored or black oats, for feeding horses. I mean the comparative value with the common kind. JAS. JACKSON. *Boston, July* 13. [We are not aware that analysis has ever indicated any difference in the composition and quality of oats of different colors, for a given weight. If any reader has any positive knowledge on the subject, he would confer a favor by furnishing it.]

CIDER MILLS.—Will you advise me through your valuable paper, which is the best cider mill in use—of compact shape—*not liable to get out of order*, and whose *merits* have been *fairly tested*—by whom made, and where can I get it, what price, &c.? W. C. Y. *Jessamine Co., Ky.* [There are several good cider mills manufactured—one at Harrisburg, Pa., by W. O. HICKOK, and two in this city—one by R. H. PEASE, and the other by EMERY BROTHERS. Which is best is not for us to decide.]

☞ A FARMER wishes to know what is the cause of, and also the remedy for the somewhat *cotted* and yellow appearance of the wool nearest the sheep when sheared.

BURNING LIME.—Will you, or some of your correspondents (who have experience in the matter) be kind enough to favor me through the pages of "The Cultivator," with the modus operandi of burning lime *with wood*, in the best and most economical manner? I wish to burn from 3000 to 5000 bushels per annum, and with as little outlay as may be practicable. If you or any of your correspondents will furnish the desired information with full and explicit directions with regard to the kind of kiln, the cost, &c., &c., they will greatly oblige, J. K. *Frederick Co., Va.*

THE PEABODY STRAWBERRY.—In answer to inquiries, we can inform our readers that another year will be required to test the value and adaptation of this famed variety to the Northern States. It is always extremely difficult to send strawberry plants long distances with the best of packing, and for this reason those cultivators who have been most successful with their plants received this spring, have barely saved them alive. They are, however, growing finely, and will be in the best bearing condition another year. The editor of the Horticulturist received this season from Columbus, specimens in a box in bearing, which had been sent three hundred miles to Savannah and eight hundred more by steamer to Philadelphia. The late frosts had injured the fruit and lessened its size—the berries were consequently smaller than expected, but the flavor was pronounced "excellent."

BOG LIME.—*Messrs. Editors*—Permit me to inquire through the columns of your much esteemed Co. Gentleman, the value of marl, a great part of which compares with slacked lime, other parts well mixed with shells. I have taken the liberty to enclose a parcel of said composition for your inspection, so as to give counsel. There is abundance of it on my property, one hundred rods from Mississippi river. Labor is so high here, and both bottom and prairie land is so rich, that it don't require it at present. If dried and burned, would it become lime, as lime is valued at three dollars per barrel—or what value said bog lime is? J. S. *Clear Water, Minnesota.* [The specimen sent, seems to be an impure shell marl, disintegrated, and mixed somewhat with the materials of the adjacent soil. There is no doubt it would be an excellent application to all land capable of being benefitted by lime. We would recommend our correspondent to try it, by giving a portion of his farm a dressing of a hundred bushels or two per acre, and greater and less quantity may be used on different plots by way of experiment, and the results observed. It must be remembered that marl can never take take the place of yard manure, and is to be applied only in connection with other fertilizing materials, to such soils as are more or less deficient in carbonate of lime, experiments affording the best proof. Pure shell marl makes excellent lime by burning, and by selecting the cleanest portions for this purpose, a good business might be made. A small kiln may be tried.]

COAL TAR, &c.—Please advise me whether cotton cloth, fastened to sheeting and covered with coal tar and sand, will make a durable water-proof roof; or, if this is liable to melt and run, what substance should be mixed with the coal tar to harden it, and the proportions? Also whether coal tar will prevent posts in the ground from rotting? U. TURNER. *Jackson Co., Mo.* [We have never seen coal tar used as proposed, but do not perceive why it should not succeed. Coal tar has often been mixed with sand and fine gravel, for forming walks on side-hills where they were otherwise liable to wash; the sand stiffened it sufficiently, and it kept its place perfectly. We would recommend the tar to be made quite warm or hot, and then mixed to a consistence of thick paint with clean sand, and applied with a fine wire brush. We have used it with great success on perishable wood, exposed constantly to air and moisture, where it acted as a perfect preservative; and if posts could be soaked some days in it, while hot, it would undoubtedly render them very durable.]

RASPBERRIES FROM SEED.—Please inform me when is the proper time to sow Raspberry seed. I wish to make a plantation of about three acres from the seed. C. B. B. *Janesville, Wis.* [The spring is the proper time to sow raspberry seed. It is a difficult matter to make it vegetate, however, and we would advise our correspondent, if he wishes a raspberry plantation, not to try to get it from seed, but to buy 50 or 100 plants of several of the best varieties, for trial. From these

he can rapidly enlarge his plantation, selecting such variety or varieties as he may find best adapted to his soil and climate.]

WORKS ON BEES.—Is there any good work published on the culture of Bees? I wish "APIS" would be a little more explicit in regard to his mode of treating Bees. I refer to No. 1, Vol. 10. ROBERT H. BISHOP. *Burnsville, Ill.* [There are three one dollar books published in this country—one by Mr. QUINBY—one by Mr. LANGSTROTH, and one by Mr. MINER—on the management of Bees, but we cannot decide which is best. We second our correspondent's call on "APIS," and hope he will favor our readers with his mode of managing Bees.]

MACKAY PIGS.—*J. H., New-York.* This breed of swine, if breed it may be called, was originated by Capt. John Mackay of Boston, many years since, by crossing several breeds which he had collected from various parts of the world. They fattened kindly, attained great weight, and were, very justly, highly prized; but no one having had the forethought to preserve the breed, they long since run out.

"GARBINZOS."—In reply to your appeal for the signification of this "mysterious word," I would refer you to Dr. Darlington's "Agricultural Botany," in which you will find the mystery sovled in a very few words. *Garbanzo*, (incorrectly printed "Garbinzos" on the Patent Office labels,) is the Spanish name of the common Chick pea or Coffee Pea—the *Cicer arietinum* of botanists—frequently cultivated in gardens, and no doubt known to most of your readers. The Doctor makes the following remark on this plant:—"This vetch is occasionally cultivated for the *seeds*, which are said to afford a tolerable substitute for *coffee*. Coffee drinkers, however, are not apt to admire *substitutes* for their favorite berry, and it is hardly likely that this plant will ever be of much account in our country. L. *Chester Co., Pa.*

HOP CULTURE.—I would be much pleased if some of your subscribers could oblige me with the mode of cultivating hops, their mode of treatment, also what kind of soil, how prepared, what the probable cost per acre, and probable average yield. All information on the subject gladly received. H. S. *Covington, Ky.*

ANALYSIS OF SWEET POTATOES.—Can you give some information of the analysis of our common sweet potato? If I knew what they contained by analysis, I think I could prepare land to grow them better. O. C. A. [We are not aware that any analisis has been made, that can be relied on for accuracy.

BONE DUST.—I wish to be informed as to the best mode of applying bone dust, and what quantity should be put to the acre to make good wheat and a crop of clover. W. R. H. *Emmorton, Md.* [Bone dust is but little used in this vicinity, most of that manufactured here being sent to Philadelphia and Baltimore. We hope some of those who have used it will furnish the information desired by our correspondent.]

SMOOTH HEAD BARLEY.—Will you or some of your subscribers be so kind as to tell where I can procure the Smooth head barley, both spring and winter, or either? J. H. *Monticello, Ill.*

SMUT IN WHEAT.—What is the cause of smut in wheat? Will smut grow? If not, why is it that wheat sown with smut in it, the smut will increase from year to year? What is the best manner to prepare seed wheat to prevent the smut? J. P. E. *Etlettsville, Ia.* [Smut is a parasitic fungus—(a plant of the puff-ball tribe,) which grows in the head and destroys the grain. It has numerous microscosic seed, so minute as to be carried through the sap pores, and in this way old seed wheat covered with this fine, dusty seed, will infect the grain of the new plant. Washing the grain repeatedly in brine, and rolling it in dry, water-slacked lime, before sowing, will prevent the smut.]

HARD-FINISH.—I wish to learn the nature of "hard-finish," so much used for inside ceiling, and the processes to which it is subjected before use. The motives that have prompted me to make this inquiry are, viz.: There is in this vicinity a large pond, fed by a never-failing spring, which has for years been a great resort for speculative and scientific minds. Its bed is a fathomless mass of pure white marl, and of no value save as a good manure. But others, upon recent investigation, have made its value almost incredible by pronouncing it a genuine article for the inside ceiling of houses. Being perfectly ignorant in regard to the latter opinion, I resort to the "Country Gentleman" for an answer to the above inquiry, wishing to satisfy myself as to its real value, nature, and most practical use. A SUBSCRIBER. [We must refer to such of our correspondents as are practical builders, for the details in making *hard-finish*, but if we are correctly informed, it is either plaster of Paris, hardened on the walls, or a mixture of perfectly clean *white* sand, with pure, white, fresh lime—the mixture gradually becoming hard on the walls like other lime and sand mortar. The marl in the bottom of the pond, evidently cannot be used for this purpose, because it is already a complete carbonate of lime, and cannot harden by union with sand; and if applied alone, it can never become harder than an application of pulverized chalk or whiting.]

PIGGERY.—I intend to build a pig-pen next month. Can you furnish me with a design, or with some practical hints for the proper construction of one? I have 20 spring pigs to fatten this fall, principally on corn. JNO. B. WYCKOFF. *Hightstown, N. J.* [The Rural Register for 1858, which will be published in a few days, gives a convenient plan, view, and description of one—to which we refer our correspondent.]

WASHING MACHINE.—In the "Register" for this year you describe and recommend a washing machine. Can you inform me where such a one can be had? and oblige C. W. S. [We do not know who manufactures the washing machine at present—perhaps some of our subscribers may give the desired information.]

LIME FOR PRESERVING APPLES.—Will you detail the mode of preserving apples by the use of lime? when and how it is applied—whether slacked or unslacked lime be applied, and whether the delicacy of flavor is at all affected by its use? H. *Mt. Vernon, N. Y.* [The effect of lime appears to be two-fold—as an antiseptic, and as an absorbent of unnecessary or improper moisture. Apples may be kept by the following process, in excellent condition: Procure tight barrels, place a layer of wheat chaff on the bottom, over this sprinkle lime, and then deposit a layer of apples—then again a layer of chaff and lime, and of apples, till the barrel is full. To prevent lime-dust touching the apples, a little chaff may be strewn over it before the apples are placed upon it. A quart of lime for a barrel will be sufficient. The fresher it is, the better it will accomplish its purpose. If a single apple decays in a barrel packed in this way, contamination of others is prevented by the chaff and lime,

and the gases generated by putrefactive fermentation are absorbed, and the confined air kept sweet.]

SMUT IN WHEAT.—Will you be so kind as to inform me through the Cultivator, the cause of wheat's smutting, and also the preventive, if any effectual preventative is known? The wheat in this vicinity is all smutted, and much of it very badly—so much so that it will not amount to more than half a crop. Last year there was a little smut in some fields This spring, fearing the disease would become more prevalent, I procured some good stone lime, (having been told that it would prevent smut,) slacked it, then wet my wheat thoroughly and sifted on the dry lime, and then stirred it until it was all evenly coated with lime. This I did immediately before sowing. It did not have the desired effect altogether, although I do not think my wheat is as badly smutted as some of my neighbors, who did not lime theirs. Will the next year's crop be more likely to smut, by sowing seed that was grown this year with smut? Any information upon this subject will be gratefully received by those in this community who read the Cultivator. M. H. HOWARD. *Morgan, Winneshick Co., Iowa, July* 28, 1857. [We have already stated, in answer to an inquiry, that smut is a parasitic fungus, spreading from the present seed to the growing plant. Washing the seed simply in clear water, will remove the infection, provided it is done repeatedly; but it is better, after washing two or three times for clearing off the heaviest portion, to wash it in lime water, brine, or blue vitriol The usual lime-dusting may be added. We have never tried blue vitriol, but have been informed that it is very efficacious. There is no doubt that our correspondent, had he first washed his wheat well in a stream of water, or in brine, before applying the lime, would have found but comparatively little smut in his wheat this year.]

DIOSCOREA BATATAS.—I received from the Patent Office, in the spring of 1856, some tubers of the "Chinese Yam (Dioscorea Batatas)" They were then planted, and with very little protection were uninjured by the frosts of last winter, being left in the ground where they grew. The vines have shot up this summer in great luxuriance. How long must the tubers remain in the earth before they are fit to use? How cooked, &c.? X. *Cleves, O.* [The tubers are said to be best when taken from the ground in the spring, a year after planting. They may be baked, boiled, or steamed, the same same as the potato, but do not require quite so long a time to cook.]

KOHL RABI.—Can you inform me where the seed of the Kohl Rabi can be obtained. J. J. H *Xenia, O.* [Of J. M. Thorburn & Co., seedsmen, New-York.]

HORSE POWER AND FEED MILL.—Which is the best horse power machine for barn use,—threshing, grinding, &c.? Also which is the best barn mill for grinding cattle feed? Information on these points from those who have tried these machines, will be useful to me, and may be also to many of your readers. T. N.

KILLING BRAKES.—Can (and if so will) you or any of the readers of The Cultivator tell me how to kill brakes in a pasture which cannot be plowed? An answer is earnestly solicited in the Sept., no. of The Cultivator. W. E. HUNTLEY.

Bone-Dust for Cattle—Bone Disease.

MESSRS. EDITORS—In your article on salt, ground bones, &c., for cattle, you recommend feeding them together—a practice which I followed for several years, until observation convinced me that it was wrong. I found that my cows ate several times as much bone when in full flow of milk as when dry, and at such times would eat salt to their injury in order to get a supply of bone. I have since had a partition in my box, and fed them separately. I believe bone as necessary as salt for milch cows, and when kept on old pastures is essential to their health, and improves the quality and quantity of their milk. Young cattle eat much less bone than old ones. My cattle eat little, if any, until they were seven or eight years old, but have since eaten considerable.

I believe that young cattle never have the "bone disease;" a complaint which I presume is much more common in its earlier stages than is generally supposed. I well remember that when I was "cow-boy," the older cows were in the summer season sometimes troubled with a lameness or rather stiffness of the hind quarters, a squeaking and rattling of the joints, and an inability to raise their hind feet over the bars. These symptoms always disappeared as the cows dried up.

I had then never heard of the bone disease, but have since (some fifteen or twenty years ago,) seen a fatal case of it, and the first symptoms were precisely the same as those above described. The cow was old, and had been milked two years in succession without drying. She lived many weeks after she was first taken, gradually growing worse until she lost the use of her hind legs, and would sit on her haunches eating the grass in a circle around her—her owner still milking her, as he said for her benefit. A post mortem examination showed the bones very dry, particularly at the joints of the hind quarters. If the cow had been dried, or fed bone-dust without drying, she would probably have recovered.

Anatomists tell us that the bones as well as other parts of an animal, are constantly being renewed—so that that which is called bone disease, is simply starvation of the bones. A neighbor informs me that his cow would eat but very little bone-dust when kept on hay from land that had been manured with bone. My cows consume from one-half bushel to a bushel each of bone in a year. Common ground bone should not be fed. The article used is the clean, dry sawdust and turning from the button-makers. H. V. W. *Waterbury, Ct.*

How To Milk Clean.

MESSRS. EDITORS—To "A Michigan Milkman," who asks for a "hint, suggestion, or item of experience, from any of your readers," in regard to defective miking, I would give my method of milking. Each milker is required to milk the same cows as far as practicable. Each time, and after the cows are all milked, we begin on one side of the yard, taking them in rotation as they stand, and *strip* each one thoroughly. But a little, it is true, is obtained from each cow, but in the aggregate it amounts to someting worth while, particularly when we consider that it is the very best of the milk, one quart of which is worth two of the first milking; and then you are sure that the cows are *all* milked and *well* milked, especially if the owner be "around," overlooking and aiding in the operation.

I have practiced the above plan for several years past, and think it repays me well for the small amount of extra time and trouble expended. D. C. M. *Chester, N. Y.*

Notes for the Month.

WHEAT TURNING TO CHESS.—Some months ago, to settle a controversy on this subject, BENJAMIN HODGE of Buffalo, offered a premium of *one hundred dollars* to any one who would demonstrate that wheat would turn to chess—to be awarded under the supervision of the New-York State Agricultural Society, and under such rules as a Committee appointed by the Society should prescribe. This premium was lately claimed by SAMUEL DAVIDSON, of Greece, Monroe Co., N. Y., who had in his possession, as he believed, the evidence of transmutation. A Committee, appointed by the Society, consisting of Prof. DEWEY and L. B. LANGWORTHY, of Rochester, and J. J. THOMAS, of Union Springs, with Col. JOHNSON, Sec. of the Society, met at Rochester recently to examine the evidence.

The experiment to prove transmutation was the following:—A quantity of earth was passed through a fine seive, to separate all chess seeds. It was placed in a pan, and several heads of wheat planted in it. When the wheat came up, it was subjected to all the hard treatment that usually produces winter-killing, viz., flooding with water, and alternately freezing and thawing for several times. Late in the spring, the whole contents of the pan were removed and set out in open ground. When the plants of wheat threw out their heads, there appeared chess heads also. This mass of wheat and chess plants was brought in and placed before the Committee. Stalks of chess were shown, the roots of which were found to proceed directly from the planted heads of wheat, which yet remained entire, and in some instances they were found to issue from the half decayed grains of wheat themselves. This was looked upon as conclusive.

The roots were taken by the Committee and first soaked in water, and afterwards gently washed, by moving them backwards and forwards slowly through it. They were then carefully examined by microscopes. The roots of the chess were now perceived to issue, not from near the end of the grain of wheat, as is usual in sprouting, but from the *side*, and in fact from almost any part. Further examination showed that they merely passed *through* crevices in the decayed wheat grains, and they were separated from the grains without tearing, being merely in contact, without any adhesion or connection. Some of the more minute chess fibres were observed by an achromatic microscope, to extend over the inner surface of the bran, where they had gone in search of the nourishment, (which is known to abound just within the bran,) in the same way that grape roots have been observed to spread over the surface of a rich decaying bone. But they easily separated, and had no connection with the grain. It was satisfactorily proved that the chess plant could not have come from these grains, by the fact that the same single stalk of chess was thus connected with five or six different grains,—which could no more have originated it, than five or six cows could have one calf. This examination, therefore, did not prove anything in favor of transmutation; and as there were many possible ways in which the chess might have become scattered on the soil, the whole experiment was admitted by all parties to be inconclusive.

The claimant is, however, perfectly "satisfied" that the wheat turned to the chess; and he is also so well satisfied with the candor and accuracy of the Committee, that he is confident he will yet convince them of the fact of transmutation, as experiments, conducted by them with great care, are to be performed under his direction, another year.

THE ENGLISH AG. SOCIETY'S MEETING FOR 1857.—The nineteenth meeting, held at Salisbury, during the week ending 25th July, appears to have been generally very successful, although we notice that some quite severe strictures have appeared upon the details of its management. The attendance, it is stated, will "put the exchequer of the Society in a better position than it has been for years." The entries of stock were 1185, about one-fourth—and those of implements about one-sixth, larger than on any previous occasion, and the excellence of the show, as a whole, is the subject of favorable comment—particularly as regards live stock. "The Society never at any previous meeting presented a more gratifying sight, than in the display of cattle, sheep, and pigs." We have not room to notice the exhibition, or the exhibitors at length. It appears that Mr. Fawkes of Farnley Hall, York, occupied a very prominent position among Short-horn breeders—for the fourth time taking the first prize for yearling bulls, and having also been the breeder of the first prize bull in the class including all between 2 and 4 years. Colonel Towneley was again successful in the class for cows, carrying off both prizes, as he did last year. The show of Herefords was good, and that of Devons larger and better than in 1856. "In sheep, the show of Leicesters and Cotswolds was superior, the Cotswold breed having never been better represented. The Southdowns were also excellent, Mr. Jonas Webb distancing all competitors." Blood and well-bred horses are said to have been fairly represented—but other classes not well filled. Pigs were very fine.

In Implements the Society offer an example worthy of imitation here, by limiting the prizes each year to a particular department, and only making awards on fair and careful trials. At Chelmsford, in 1856, plows, harrows, and rollers were the especial articles of competition. This year, £155 were set aside as premiums for drills and horse-hoes, hay machines and rakes, reaping and mowing machines, and carts and wagons. £500 was also to be awarded to the best steam cultivator. The first prize for Reapers was taken by McCormick's machine, made by Burgess & Key—for Mowers by the "American Eagle" made by Ruggles, Nourse & Mason, and the same patent which took the $1000 prize last year in Massachusetts, but which since appears in this country to have failed to maintain the high reputation then acquired.

Four Steam Cultivators were tried but no prizes awarded. There was much complaint as to the character of the field selected for the trial, for which a high price was paid, but which proved in soil flinty and baked, as well as so steep as to be entirely unsuitable.

IRRIGATION.—We see it stated that the Hon. HUGH WHITE has commenced the erection of a wind-mill on the north bank of the Mohawk, a few yards above the Albany, Vermont and Canada Railroad Bridge, to be used in pumping water into a reservoir on a hill a short distance west of his house, for the purpose of irrigating his farm.

☞ In another part of this paper will be found a rather extended summary of the notes of our visit at JOHN JOHNSTON'S—so extended, indeed, that we were forced to omit what we had intended to say of the places of Messrs. R. L. SWAN and H. T. E. FOSTER. We caught but a glimpse, it is true, of their agricultural operations; but both gentlemen have carried on their respective farms with so much system, intelligence and enterprise, that it would be unfair in the highest degree, to pass by the results of their exertions without notice. The neatness and order, not less than the magnificent crops which are to be seen at each of their establishments, render them both models for universal imitation. We hope at some time to be able to speak of them from longer observation.

— We also omitted all that we had intended to say of the beauty of the lake scenery, and of Geneva itself; but to those who have visited the place it would be unnecessary, and to those who have not, we should be successful in giving but a faint idea of the reality.

THE DYNAMOMETER TRIAL AT SYRACUSE.—Previous trials of machines by this useful test, have all of them, so far as we are aware, been wanting in certain respects essential to a proper degree of exactness. For example in determining the draft of a mowing machine it is well enough to say that it was equal to so many pounds per minute during each minute of the time consumed in going a certain distance. But when a *comparison* is instituted between different machines, a more intricate calculation becomes necessary. *First*, if a machine does its work in four minutes at a draft of 350 pounds, while another does the same work in three minutes at a draft of 400 pounds, the ratio between the two sums, 350 and 400, by no means expresses a correct comparison between the draft of the two; for, if *the same length of time* had been taken by the latter as the former, its draft would have been reduced perhaps considerably below that of the other. *Secondly*, the *width of swath* must introduce another element into the proportion; for, if of two machines, showing the same draft and the same time, one cuts six inches or a foot wider swath, of course it would be unfair to rank the power expended upon them exactly alike.

Both these elements are now undergoing consideration, and being calculated by the members of the Syracuse board of Judges, having the dynamometrical trial in charge. What we wish to know is the exact power each machine requires to cut, say one foot in width, provided all cut swaths of equal length in equal time.

On this basis we shall be able to determine their comparative draft exactly. Other sub-committees are engaged in making out reports upon the comparative mechanical construction—work done, &c.,—all of which, when completed and combined, must throw much light that is new even to manufacturers of machines, upon the points of practical importance involved in all the differences, large and minute, in their construction.

THE LATE TRIAL OF REAPERS, &C., IN MARYLAND.—To the account of this trial, lately published in the Country Gentleman—the first agricultural journal in which any account of it appeared—it is proper to add that among the mowers most successful were those using the Track-Clearer. This appurtenance to those machines, it is said by the friends of Ketchum's mower, belong exclusively to that machine, and to have been the invention of the party giving his name to that machine. How well this claim is founded it is not for your correspondent to decide. If this invention be protected by a patent, of course those entitled to its advantages will know how to secure them. E. L. R; *Baltimore, Md.*

ARRIVAL OF STOCK.—We learn that the stock of the Illinois Importing Company, an account of which has already appeared in our columns, and about the safety of which there has lately been a good deal of anxiety, arrived at Philadelphia on Monday of last week by the ship Georgia, after a passage of 58 days, during which three fine two-year-old bulls and one cow died, and also one mare, two hogs and two sheep. The stock arrived consists of 28 Short-horn cattle, 2 stallions, 18 hogs and 19 sheep. Considering the length of voyage, they are in fair condition, and after a little rest will be forwarded to their destination in the west.

THE KENTUCKY HARVESTER.—We are furnished by a friend with the following statement in relation to the characteristics of this machine, as manufactured by Messrs. Miller, Wingate & Co., of Louisville. We understand that it is there meeting with large sales, and acquiring a good reputation in all the particulars named: "1st. Large free gearing, giving great ease of motion, and two large wheels carrying the cutter bar up at any height, from one to eight inches. When used as a mower, the driver can, by a lever at his right, instantly raise and lower the cutter bar, and by a lever at his left, can instantly stop the knife—two very important points especially where the machines are to be used on rough and uneven ground. All the essential parts of the machine are made of wrought iron. It runs very light, and is easy work for two horses. The cutter bar is made of boiler iron, folded over with the round side in front; the guard fingers are enclosed *within* the bar, rendering them very secure and very difficult to get out of line. The guard fingers are of the best wrought iron, polished, and seem to pass through the grass with great ease. The grass is spread with great regularity, and left very smooth and even. We think the speed, manner of spreading the grass, easy draft, durability, reliability, and simplicity of construction, are the prominent points.

MARYLAND STATE AG. SOCIERY.—The next Fair of this Society is to be held at Baltimore, Oct. 20–23. Among the prizes are one of $25 for the best animal portrait in oil, and two of $15 each for animal portraits taken by camera obscura, and for engraved or lithographed. Also several prizes for new inventions in aid of agriculture and for essays on various subjects connected therewith.

SPRINGFIELD (MASS) HORSE SHOW.—Our readers will remember that there was a great National Exhibition of Horses on the United States Armory Grounds at Springfield, in 1853. This show, the first of the kind in the country, was admirably managed, and passed off with great eclat. The County (Hampden) Ag. Society having purchased and fitted up a beautiful park of 20 acres for its annul exhibitions, affording every convenience for a large exhibition of horses, the association of gentlemen under whose auspices the previous one was held, have announced a "National Exhibition of Imported Blood and American bred Horses," to be opened at Springfield on the 30th of Sept., and to continue for three days. The prizes offered, amount to nearly $2,500, and embrace all kinds of horses, arranged under nineteen classes.

The show grounds of the Hampden Co. Ag. Society, on which this exhibition is to be held, are to be inaugurated Sept. 29—the Inaugural Address by Rev. HENRY WARD BEECHER.

A SIGHT WORTH SEEING.—In the report of Hon. M. L. Dunlap, on the recent reaper trial near Urbana, Ill., a fact is stated incidentally, says the Chicago Press, which is worthy of at least a passing thought. On the farm of Messrs. Carle & Thomas, Mr. Dunlap found a wheat field consisting of *one thousand acres, and in this field twelve reaping machines at work.* This was a sight worth seeing, truly, and one that has been made possible only within a few years. By the employment of twelve reapers, this immense field can be put in shock in from four to five days. Under the old system of cutting by hand it would require an army of one hundred "cradlers" the same length of time. Or it

would take ten "cradlers" from forty to fifty days to complete the job. The reader will see at once that it is only by the use of machinery that farming can be conducted upon so extendsive a scale.

AMERICAN INSTITUTE.—This institution, whose next exhibition is to open at the Crystal Palace, New-York, on the 15th Sept., offers prizes of $20 and $10 for the best and second best barrels of Winter and Spring Wheat, and prizes of $15 and $8 for best and second best barrels of Rye, Buckwheat, Barley, Oats, Yellow and White Corn, and for the best and second best bushel of Chinese Sugar Cane Seed, Clover Seed, Timothy Seed, and Orchard and Red-top Grass Seed. For any further information, address WM. B. LEONARD, Cor. Sec'y, New-York.

ARABIAN HORSES IN KENTUCKY.—Mr. N. K. RICHARDS of Georgetown, Ky., who some years since procured from Arabia two stallions and a mare of the best blood, has recently received three more stallions and two mares, selected by himself after a laborious search of many months among the different tribes of Arabia, and which are believed to be fully equal to any horses ever sent out of that country. Mr. R.'s object is not to breed pure Arabians, but to cross this stock with the thorough-breds of Kentucky.

THE KENTUCKY HARVESTER.—At a trial of Reapers and Mowers recently held near St. Louis, the first prize of $150, for the best Reaper, and the first prize of $300, for the best Mower and Reaper combined, were both awarded to Miller, Wingate & Co. of Louisville, Ky., for their "Kentucky Harvester."

☞ FOWLER & WELLS, New-York, have issued a small pamphlet entitled "How to get a Patent," containing all the instructions necessary for inventors. We presume it can be procured by enclosing a post-office stamp to their address.

OUR CIRCULATION.—

"The sale of the *Country Gentleman* nearly equals the entire sale of the whole agricultural press of the United Kingdom."

The above sentence occurs in the course of a review in the *North British Agriculturist*, July 15 of ROBERT RUSSEL'S American Tour. It is probably no more than is true in relation to our weekly and monthly circulation combined—the *Cultivator*, as our readers are aware, being made up monthly of extracts from the CO. GENT. Mr. R. put the whole down as weekly, and, excepting this misapprehension, his statement was correct at the time of his visit, since when, however, our circulation has been on the increase.

The periodical from which the above is taken, is, by the way, one of the best of our foreign exchanges. It is published weekly at Edinburgh, Scotland, at *six dollars* a year. The regular number of pages is 16, although a supplement is often added, bringing it up to 20, and occasionally to 24—the page being an inch and a half broader and four inches longer than ours. About five of them, however, are taken up with Advertisements, and as many more with News.

JONAS WEBB'S SOUTH DOWN RAM-LETTING.—The *thirty-first* annual recurrence of this occasion took place at Babraham, July 16, and showed a continued increase in the public appreciation of the beautiful breed of sheep, with the improvement of which Mr. W.'s name has been so long and intimately connected. The attendance was good, and the usual hospitalities enjoyed, beginning with a lunch and concluding in genuine British style with a dinner—an institution Americans have yet to adopt. There were in the list of rams exposed on the ground, one five-year-old, ten four-year-olds, sixteen three-year-olds, fifty-three two-year-olds, and sixty yearlings, or 140 in all. Of these, sixty-five were "let" by auction to the highest bidders—all being started at certain prices, when if no advance was made the party calling any sheep in was adjudged the hirer; the highest bidder, of course, taking any ram in regard to which competition ensued. The gross amount at which the 65 were put up was £1524, 12*s*—the gross amount they realized £1812, 6*s*., giving an average of very nearly $140 per head, showing an increase of more than $10 a head on any former year, with the exception of 1856, which was considered an unusually good one. The price named as the average would be considered here pretty good, for the use one year of a single animal. But we find in looking over those above the average, some still mo e astonishing figures: two were let for 50 guineas each ($250); one for 52 gs.; two for 70 gs. each; one for 71 gs.; one for 100 guineas, and one (No. 115,) for 197 guineas, or $985—the last being the highest price ever realized by Mr. Webb for a year's hire of one ram, and (we may add as usual in such cases) being bid for an American gentleman—Mr. LINDSAY of New-York, by whom it was reported that the animal would probably be purchased in order to make him a permanent accession to our South Down blood. He was put up at 130 guineas, being nearly double the price set on any other, and showing no less its breeder's estimate of its comparative value, than the enterprise of the bidder in securing the best, "regardless of expense."

THE CO GENT. AT THE WEST.—I have been a subscriber of the Country Gentleman only for a short time, yet I must be permitted to express to you my entire satisfaction with it. It suits my idea of an agricultural paper better than any thing I have yet seen. At first I doubted the propriety of taking an agricultural paper published so far from home; yet I find it none the less valuable on that account. Indeed, in some respects, its value is increased, as it is published in a region of country where agriculture is in a more advanced state than with us. Editors of agricultural papers in the course of a few years, become more or less familiar with all the subjects treated of in such papers, while the readers are more or less changing from year to year, many of them young men like myself, without a great deal of experience. We have to ask the same questions which have been asked before, and which have been answered. R. H. B. *McDonough Co., Ill.*

POTATOES MIXING IN THE HILL.—We have raised for three years past, the Western Red and Mercer potatoes side by side. The seed came from different places—was pure when it came I believe, and they have been gradually mixing, the mercers with the reds. The hybrids are in every proportion, frequently one half of a potato white or bluish, the other red, forming when washed quite a contrast. Inquiry of farmers compels me to admit it is not an isolated case, and although aware of the slight foundations often belonging to popular beliefs, yet this I have seen. W. H. S. *Plainfield, N. J.*

SEED DRILL.—The certificate just sent us from Jonesville, Saratoga Co., in favor of a patent Drill, we shall be pleased to publish as an an advertisement. From all we hear of the Drill alluded to, we doubt not it is a good one, and we presume the manufacturers would find it greatly to their advantage to advertise it in our columns.

FINE STRAWBERRIES.—If you were not so far from us, would liked to have sent you a specimen of strawberries grown here this summer. I imported the plants from England, called "Magnum Bonum." The berries are beautiful color, true pine-apple flavor, and measured four and a half inches long, and five and a half in circumference. HENRY COOK. *Alexandria, Va.*

CABBAGES.—In the New-England Farmer of July 11th, it is stated that more than sixty tons of cabbages have been grown on an acre of land underdrained the year before, where thirty tons had previously been viewed as a large crop.

The American Farmer's Encyclopedia,

EMBRACING all the recent discoveries in Agricultural Chemistry, and the use of Mineral, Vegetable and Animal Manures. With Descriptions and Figures of American Insects injurious to Vegetation. Being a Complete Guide for the cultivation of every variety of Garden and Field Crops. Illustrated by numerous engravings of Grasses, Grains, Animals, Implements, Insects, &c By GOUVERNEUR EMERSON, of Pennsylvania, upon the basis of Johnson's Farmer's Encyclopedia.

Price Four Dollars. Sent free of Postage upon receipt of price. "No Farmer should be without it." Published by C. M. SAXTON & CO.,
Agricultural Book Publishers,
Aug. 27—w&m1t 140 Fulton-st., New-York.

TO NURSERYMEN.

STOCKS AND SEEDLINGS.

WE BEG to announce to the Trade that we are able to supply the following in large quantities, viz :

MAZZARD CHERRY Seedlings,	1 year.
APPLE Seedlings,	2 "
QUINCE from Cuttings,	1 "
HORSE CHESTNUTS	1, 2 & 3 "
ELM, AMERICAN.	2 & 3 "
BLACK WALNUT and BUTTERNUT,	3 "
MAPLE, Silver and Scarlet,	2 & 3 "
MAPLE, Sugar,	1 "
MAGNOLIA, Acuminata,	2 & 3 "
MOUNTAIN ASH, European,	1 "
LABURNUMS,	2 "
OAKS, Red and White,	3 "

And many other articles, for which see other advertisement, and Catalogues, Descriptive and Wholesale, which are sent gratis to all who apply and enclose stamps to prepay postage. ELLWANGER & BARRY,
Aug. 20, w&m1t Mount Hope Nurseries, Nochester, N. Y.

Bulbous Roots, Roses, Strawberries and Trees.

WM. R. PRINCE & CO., Flushing, N. Y., offer their most extensive collection of Bulbous Flower Roots in their Priced Catalogues for 1857. The new Descriptive Catalogue of the finest Strawberries—105 varieties—and New Catalogue of Roses, Tree and Herbaceous Pæonies, Carnations, Phlox, Iris, Chrysanthemums, Dahlias, &c., and a Descriptive Catalogue of Fruit and Ornamental Trees, are ready for applicants who enclose stamps. Chinese Potato Tubers will now be contracted for, deliverable 1st of October, with a Treatise on Culture. 10,000 Linnæus, Victoria and Early Tobolsk Rhubarb. 50,000 German Asparagus. 250,000 American Thorn, Arbor Vitæ, Osage Orange, Honey Locust, and Privet, for hedges. 10,000 Cherry and Provence Currants. 50,000 Lawton and Imperial Blackberries. 30,000 Orange, Antwerp, and other Raspberries. 20,000 Hardy Grapes, English and Houghton Gooseberries, and Cranberries. All in quantity at lowest rates. N. B. The collection in every Department is unequalled; and many of the varieties of Fruit Trees and of Strawberries, &c., cultivated by others, are shown to be worthless. Aug. 27—w2tm1t*

NOTICE.

A great and rare chance for Pomologists and Nurserymen.

THE subscribers will sell at their premises, (on account of the declining health of the Producer,) from 1,500 to 2,000 New Varieties of Seedling Grape Vines, five and six years old, ready to fruit the coming season, in lots to suit purchasers. All perfectly hardy—selected from all the hardy varieties of Northern and Western Grapes. Such an opportunity has never before been offered the fruit growing community, of making thousands from a small investment of a few dollars. Please call and examine the stock on the premises of the subscribers, between this and the middle of September next.

J. LEWIS, P. STEWART.
New Lebanon, Columbia Co., N. Y. Aug. 20—w&m1t.

SUFFOLKS.

ONE or two pair of fine Suffolk pigs for sale by the Subscriber, well haired, and from different litters; Price, $40 per pair. J. R. PAGE,
Aug. 20—w4tm1t Sennett, N. Y.

HORSE POWERS, THRESHING MACHINES, EXCELSIOR FAN MILLS,

AT the North River Agricultural Warehouse.
GRIFFING BROTHER & CO.,
Aug. 20—w8tm2t 60 Courtlandt-St., New-York.

New and Rare Ornamental Trees.

MESSRS. ELLWANGER & BARRY solicit the attention of gentlemen who are interested in new and rare Ornamental Trees, to the following, viz :

KILMARNOCK WEEPING WILLOW, with pendulous brown branches and large glossy leaves—an elegant tree.

AMERICAN WEEPING WILLOW.—A beautiful small tree with a profusion of light, graceful, drooping branches and small silvery green foliage.

ROSEMARY LEAVED WILLOW.—A very striking tree with feathery branches and bright silvery foliage.

WEEPING POPLAR.—A remarkably graceful tree—the tremulous foliage and drooping habit combined, are quite expressive.

CUT-LEAVED WEEPING BIRCH.—No other tree possesses in every particular, so much of lightness and elegance as this.

PURPLE-LEAVED SYCAMORE—A very striking tree, having large rich purple foliage.

AUCUBA-LEAVED ASH—Quite a novelty, having the leaves all profusely sprinkled with golden blotches.

GOLD-STRIPED WEEPING ASH—A variety of the common Weeping Ash, with golden stripes and blotches on both foliage and branches.

ELMS, PURPLE-LEAVED, NETTLE-LEAVED, PYRAMIDAL, HUNTINGDON, and several other remarkable and beautiful species and varieties.

These are but a few of the many rare and fine trees which E. & B. now offer. In new and rare Shrubs, Roses, Pæonies, Phloxes, and other popular classes of plants, their collection is equally rich.

For particulars they must refer to the following Catalogues, which will be sent prepaid to all who enclose one stamp for each :—No. 1—Fruits. No. 2—Ornamental Trees. No. 3—Green House and Bedding Plants, Dahlias, &c. No. 4—Wholesale.

MT. HOPE NURSERIES, Rochester, N. Y., Aug. 1857.
Aug. 20—w1m1t.

STRAWBERRIES.

HOVEY'S SEEDLING, Boston Pine, and Large Early Scarlet—vigorous and true to name—$6 per 1,000—$1 per 100.

Also, Brinckle's Orange Raspberry, and Linnæus Rhubarb—a new English variety—very superior.

FREEMAN & KENDALL,
Ravenswood Fruit Garden,
Sept. 1—m1t Ravenswood, L. I., near New-York.

SHORT-HORNS.

I HAVE in my stables three young BULLS, two of which I offer for sale, viz :

"HIAWATHA," 1663—red—calved November, 1855; bred by Sam'l Thorne, Esq. A first-class animal in every respect, with extraordinary good handling and quality—Price $1,000.

"KNIGHT OF GWYNNE."—mostly red—calved May, 1857; bred by Sam'l Thorne, Esq.; got by Grand Duke 2d, (12961) out of Dinah Gwynne, by Balco (9918.) For farther pedigrees, see 2d vol. A. H. B., p. 352—Price $500.

Also several Cows and Heifers in calf to Hiawatha, at from $200 to $500.

"CRICKET"—roan—calved June, 1857; got by Double Duke, 1451½, out of Crumie—see 3d vol. A. H. B., p. 357—Price $200.

My farm is but five minutes walk from Sennett Station of New-York Central R. R., (old road,) and five miles east of Auburn. J. R. PAGE,
Aug. 27—w4tm1t Sennett, N. Y.

PERUVIAN GUANO,

Superphosphate of Lime, &c.

THE best quality of Peruvian Guano, with Government weight and brand on each bag, by the cargo or in smaller quantities, at the LOWEST PRICE.

SUPERPHOSPHATE OF LIME...Being agent of the largest manufacturers, I can supply a first-rate article at the lowest manufacturer's prices.

BONE-DUST—Coarse and fine ground—also sawings and filings.

POUDRETTE and TAFEU by the barrel.

My warehouse is the LARGEST depot in the United States for the various kinds of FERTILIZERS, all of which are guaranteed of the best and most reliable quality.

AGRICULTURAL AND HORTICULTURAL IMPLEMENTS, FIELD AND GARDEN SEEDS,
A large and complete assortment of all the improved kinds.

MOWING AND REAPING Machines.

R. L. ALLEN,
Feb. 26—weow&mtf 189 & 191 Water-st., New-York.

Fruit and Ornamental Trees,

FOR AUTUMN OF 1857.

ELLWANGER & BARRY beg to announce that they offer for the ensuing Fall Trade their usual extensive stock of nursery articles, embracing

STANDARD AND DWARF FRUIT TREES of all kinds.

SMALL FRUITS, embracing the finest Currants, Gooseberries, Raspberries, Blackberries, Strawberries, &c., &c.

NUTS, including Walnuts, Filberts, Chestnuts, &c.

RHUBARB, Linnæus, Victoria, &c., all the best.

GIANT ASPARAGUS, &c., &c.

DECIDUOUS ORNEMENTAL TREES for streets, parks, lawns, cemeteries, &c.

WEEPING TREES, a great collection.

EVERGREEN TREES, including upwards of half a million of Norway Spruce of all sizes, and a large stock of the gigantic WASHINGTONIA, and other California trees.

FLOWERING SHRUBS, Roses, Green-House, Border and Bedding Plants, Hedging, Stocks and Seedlings of all sorts, &c., &c.

Nurserymen, &c., dealt with on the most liberal terms, and amateur's orders attended to with the greatest care. Packing done in the most thorough and skillful manner, and with the best materials.

For full particulars we refer to special advertisements and to the following Catalogues, sent gratis to all who apply and inclose a stamp for each:

No. 1—Descriptive Catalogue of Fruits.

No 2—Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.

No. 3—Catalogue of Dahlias, Green-House and Bedding Plants.

No. 4—Wholesale or Trade List.

ELLWANGER & BARRY,
Mount Hope Nurseries, Rochester, N. Y.

Aug. 13—w&m1t.

Hyacinths, Tulips, Double Dahlias, &c.

THE subscribers offer this season a more extensive assortment than usual of *Dutch Bulbous Roots*, imported from the best flower nurseries of Europe, in the finest condition, and all first class bulbs—embracing every desirable variety of *Double and Single Hyacinths*, adapted for house or out-door flowering.

EARLY AND LATE DOUBLE AND SINGLE TULIPS of every shade and hue.

POLYANTHUS NARCISSUS.

ROMAN NARCISSUS for *early* winter blooming.

SINGLE NARCISSUS.

DOUBLE AND SINGLE JONQUILLS.

CROCUS of all sorts, including some very fine new named seedling varieties.

CROWN IMPERIALS.

FRITTILLARIAS.

GLADIOLUS.

IRIS.

IXIAS.

LILIES.

ARUMS.

COLCHICUMS, with numerous other sorts of approved tested value.

CATALOGUES of the above, with descriptions and directions for planting and managing, will be mailed to applicants inclosing a stamp.

Hyacinth Glasses, Fancy Crocus Pots, &c.

J. M. THORBURN & CO., Seedsmen, &c.,
Aug. 13—w4m1t. 15 John St., New-York.

PREMIUM STRAWBERRIES.

THE New Catalogue describes 102 varieties, including Prince's Scarlet and Magnate—monstrous, and will produce double the crop of Peabody's—Le Baron, and Ladies Pine, superior in flavor to all others; Marylandica, Harlem Orange, Charles' Favorite, Sir Charles Napier, Scarlet Nonpareil, Crystal Palace, Wilson's Albany, $2.00 per 100; Peabody's $2½ per dozen; Hooker $1.00 per dozen, $4.00 per 100. We will contract for delivery of New Rochelle or Lawton Imperial Blackberries, Cherry and other Currants, English and Houghton Gooseberries, Hardy Brentford, Antwerp and Orange Raspberries, and Chinese Potato tubers, by 100 or 1000, at moderate rates.

WM. R. PRINCE & CO.
Aug. 6—w1tm1t.* Flushing.

Plum and Cherry Seedlings.

100,000 Prime Mazzard Cherry Seedlings for sale at $5 per M. No charge for package when 5,000 are taken.

15,000 strong two years old Plum Seedlings, at $10 per M.

E. G. STUDLEY,
Aug. 13—w2tm2t. Claverack, Col. Co., N. Y.

To Seedsmen, Planters, &c.

THORBURN'S Preliminary Wholesale Priced List of **Vegetable and Agricultural Seeds, Dutch Bulbous Roots, Double Dahlias, &c.**, for the Fall of 1857, is just published, and will be mailed to dealers and others requiring seeds in quantities, enclosing a stamp for return postage.

This year's seeds, so far as harvested, are of prime quality, generally abundant, and prices correspondingly moderate. J. M. THORBURN & CO., Seedsmen, &c.,
Aug. 13—weow4t—m2t. 15 John St., New-York.

GOOSEBERRY PLANTS.

GENUINE HOUGHTON'S Seedling—the only variety worth cultivating. Railroad facilities for sending in all directions. Furnished by the dozen or thousand. Orders should be sent in now. C. B. MURRAY,
July 30—m1tw2t 20 Mile Stand, Warren Co., Ohio.

SMALL FRUITS,

Strawberries, Raspberries, Currants, &c.

WE solicit the attention of Nurserymen, Dealers and Amateur fruit-growers to our collection of the above Fruits, the most extensive in quantity and variety ever offered in this country.

STRAWBERRIES—Upwards of 60 varieties, all fruited and tested on our own grounds—including the Hooker, Brighton Pine, Jenny Lind, Genesee, and all the best American sorts, and Triomphe de Gand, Trollope's Victoria, and all the best foreign varieties.

RASPBERRIES—All the popular varieties, including the Orange, the best and most beautiful of its color. Also the superb or new Autumnal or Everbearing sorts—Merveille de quatre Saisons and Belle de Fontenay.

CURRANTS—Upwards of 20 varieties, including those superb sorts—Cherry, White Grape, Victoria, Prince Albert, &c., &c.

GOOSEBERRIES—A large assortment of the best English large sorts, and the American Seedling, which bears immense crops and is always free from mildew.

BLACKBERRIES—New Rochelle or Lawton, and High Bush or Dorchester.

We solicit orders for the above and all other Nursery articles, and pledge ourselves to give them our best attention.

The following Catalogues will be sent gratis to all who apply and inclose stamps to prepay postage:

No. 1—A Descriptive Catalogue of Fruits.

No. 2—A Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.

No. 3—A Catalogue of Dahlias, Verbenas, Petunias, and new and select Green-House and Bedding Plants, published every Spring.

No. 4—A Wholesale Catalogue for Nurserymen, Dealers and others who purchase extensively.

☞ See other advertisement.

ELLWANGER & BARRY,
Mount Hope Nurseries, Rochester, N. Y.

Aug. 13—w&m1t.

Excelsior Cider and Wine Mill.

Krauser's Patent—$45.

THIS is a light Mill, easily handled, and does more work, with less power, and in less time than any other in use. Two men will readily make from eight to ten barrels of cider per day, and that with seven to eight bushels of good apples per barrel. By the application of Horse Power, much more may be done. It is well adapted, in all respects, to the manufacture of Wine, from the Grape, as Cider from the Apple. The pulp, or pomace, is easily subjected to a pressure of about ten tons, by the use of a lever, in the hands of one man. It is very simple in its arrangement, and from itspeculiar construction is not liable to get out of order by any ordinary or necessary use, and it cannot be clogged by over-feeding. This Mill took the first prize (a Silver Medal,) over Hickok's, at the Pennsylvania State Fair.

Having very much improved the pressing part of the Mill, and made several other important improvements, I have been obliged to increase the price to $45. A liberal discount to dealers. Address

RICH'D H. PEASE,
Aug. 6—w4tm1t. Albany, N. Y.

Please to Read This.

IF YOU WANT EMPLOYMENT, send at once for Mr. SEARS' CIRCULARS TO BOOK AGENTS. Our publications are considered among the most saleable. Address (postpaid) ROBERT SEARS, Publisher,
March 19—w6tm6t No. 181 William-st., New-York.

Great Sale of
DEVON CATTLE
And South Down Sheep.
On Wednesday, 9th of September, 1857.

I will sell at public auction, without reserve, my herd of Devon Cattle, about forty-five in number, and my flock of South Down Sheep, about one hundred, at my farm on Grand Island, two miles from the rail road and omnibus stations in North Buffalo.

I have bred Devons for many years. The original stock were derived from the best animals, and for the last seven years my breeding bulls have been of imported blood, direct from Devonshire, England, which, with several of my present cows, are recorded in the English Devon Herd Book. All my herd will be recorded in the American Devon Herd Book, soon to be published, and are equal probably, in quality, to any others in this country. The herd consists of about 30 cows and heifers, and 15 or 16 bulls and bull calves.

My South Downs are descended originally from the flocks of Mr. Ellman, the Duke of Richmond and other celebrated English breeders, crossed for the last seven or eight years with rams bred by the great South Down breeder, Mr. Webb, of Babraham, England. There will be 75 or 80 ewes, the remainder rams.

As I intend making a CLEAN SALE, this will probably be a better opportunity for purchasers to select animals to their liking than any other which will occur for some time.

Descriptive Catalogues will be ready by the first of August, which will be sent by mail to all those applying to me by letter.

TERMS OF SALE.—For all sums less than $100, cash; on sums of $100 and over, good notes at three months, on interest, payable at the bank, will be received.

The stock will be delivered on steamboat or railroad, at Buffalo, as may be desired, the day after the sale.

Those wishing to view the stock previous to the sale, will be conveyed to the farm by calling at my residence; and those attending on the sale day will cross the Niagara river between the farm and the main shore by steam ferry from the omnibus station at Lower Black Rock or North Buffalo, to which either the omnibuses or rail cars will bring them from their stations in Buffalo. Sale to commence at 11 o'clock, A. M., of the first day.

LEWIS F. ALLEN.

Black Rock, N. Y., July 16, 1857—weow5t—m2t.

ESSEX PIGS.

THE Subscriber is now ready to receive orders for pigs of this breed from his Spring litters. Three of these were sired by his imported boar "Brum," selected as the best pig in the pen of five to which the first premium was awarded at the Birmingham (Eng.) Show in Dec., 1856; and two by Mr. Thorne's imported boar "Chelmsford," winner of the first prize at the last Show of the Royal Ag. Society.

Selections will be made in strict accordance with the order of application. Where pairs are sent they will be taken from litters sired by different boars.

Price at six weeks old, $25 per pair; single pigs, $15; well boxed and shipped at Rhinebeck. TERMS CASH.

C. S. WAINWRIGHT,
The Meadows,
June 25—w4t—maug&sept. Near Rhinebeck, N. Y.

PERUVIAN GUANO,

In large or small quantities at Lowest Market Price

R. L. ALLEN, 189 & 191 Water-st., New-York.

☞ BEWARE of adulterated or damp Guano, and of all other FERTILIZERS which can be mixed or depreciated without detection. The demand for artificial and commercial fertilizers is now so large in the United States, that it is becoming a great object to adulterate them. This has been done to so considerable an extent in England, as to have called for the most stringent measures for the exposure of rascality, and the protection of farmers.

Feb 26—weow&mtf

PERUVIAN GUANO,
Government Weight and Brand.

COLUMBIAN GUANO,
Government Weight and Brand.

SUPERPHOSPHATE OF LIME.
MANIPULATED GUANO NUMBER 1.
BONE DUST.

For sale by A. LONGETT, 34 Cliff Street,
Aug. 1—m3t. Corner of Fulton, New-York

Farm for Sale.

THE subscriber offers for sale his farm in Fairfax Co., Va., 6 miles north of the Court House, and about 20 miles from Alexandria and Washington respectively, and 2 miles from the Mannasses Gap and Alexandria R. R. Station, and 3 miles from Alexandria, London and Hampshire Railroad Station, both roads being now in course of construction.

The farm contains 321 acres of land, about half of which is cleared and under a good state of cultivation; the balance is in timber. There is supposed to be 200,000 feet of good saw timber on the land. There is two steam saw-mills, lately put up, in the neighborhood; one near one side of the land—the other is about half a mile from the other side. The land can be divided into three farms; there are three dwelling-houses on it, all nearly new. There is a large orchard of apples of choice improved fruit, now bearing; also peaches, plums and cherries. The land is well watered by never-failing springs that run together, and afford plenty of water to drive a wheel of capacity enough to saw wood or thresh. A large portion of the land is alluvial bottom, a portion of which is cleared and ditched.

There is also a stone quarry on the land. To one seeking Virginia land, this presents many inducements, and will be sold low, and on reasonable terms of payment.

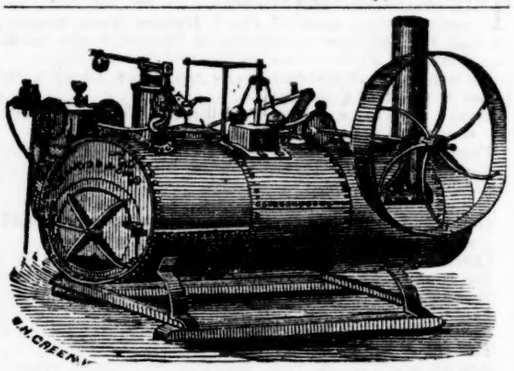
Any one wishing further particulars respecting the land, may address me at Chantilly, Fairfax Co., Va.

July 16—w1tm2t. BENJ. R. BARLOW.

First Class Family Journals.

LIFE ILLUSTRATED: A First Class Pictorial Paper, weekly. $2 a year; $1 for half a year....WATER-CURE JOURNAL: Devoted to the Laws of Life and Health. $1 a year....PHRENOLOGICAL JOURNAL: Devoted to the Improvement of Mankind. $1 a year. The three Journals sent one year for $3. Address

FOWLER & WELLS,
July 9—w4tm2t. No. 308 Broadway, New-York.



Wood's Portable Steam Engine Works,
Eaton, Madison Co., N. Y.

A. N. WOOD & CO.

Practical Machinists, and Builders of their Celebrated

PORTABLE STEAM ENGINES

For Farm and Mechanical Purposes.

WE HAVE made great improvements in our Engines the past winter, particularly in the manner of setting the tubes in the boilers, (by Prosser's Patent) adding a large wrought-iron dome in place of small cast ones, increased the size of fire-box, with ash-pan that can be closed up tight or opened at pleasure,—also in the manner of connecting the governor to throttle, making it direct action.

Parties wishing Circulars with cuts of Engine, should enclose P. O. Stamp to pay return postage on same. The following is our

PRICE LIST FOR 1857.

Horse power	estimate weight	space occupied	cash price	fly-wheel diameter	face of wheel
2½	2000 lb.	4 by 5 ft.	$240	39 in.	5½ in.
3	2200 "	5 by 5 "	290	39 "	5½ "
4	2500 "	7 by 5 "	355	40 "	6 "
6	3600 "	7 by 5 "	550	44 "	7 "
8	4800 "	9 by 6½ "	700	48 "	8 "
10	6000 "	10 by 6½ "	875	60 "	8 "
12	7500 "	14 by 6½ "	1050	72 "	12 "

The above price includes boxing and delivered on board cars.

A. N. WOOD & CO.

April 23—wtf—June 1—mft.

Cider Mill and Press,

Much Improved over Last Year's Make.

1. The frames are put together with joint bolts.
2. The fly wheel is 22 inches in diameter instead of 16.
3. The form of the teeth has been changed, so as to make them grind easier and freer.
4. Entirely new gearings have been constructed.

For sale by JOHN ALEXANDER,
Aug 1—m2t—waug20 4t. 34 Cliff-st., New-York

Choice Farm Lands for Sale.

THE ILLINOIS CENTRAL R. R. COMPANY,

IS NOW PREPARED TO SELL ABOUT

1,500,000 ACRES

OF CHOICE FARMING LANDS,

In Tracts of 40 Acres and upwards, on Long Credits and at Low Rates of Interest.

THESE Lands were granted by the Government to aid in the construction of this Road, and are among the richest and most fertile in the world. They extend from north-east and north-west, through the middle of the State, to the extreme south, and include every variety of climate and productions found between those parallels of latitude. The northern portion is chiefly prairie, interspersed with fine groves, and in the middle and southern sections timber predominates, alternating with beautiful prairies and openings.

The climate is more healthy, mild and equable, than any other part of the country—the air is pure and bracing, while living streams and springs of excellent water abound.

Bituminous Coal is extensively mined, and supplies a cheap and desirable fuel, being furnished at many points at $2 to $4 per ton—and wood can be had at the same rate per cord.

Building Stone of excellent quality also abounds, which can be procured for little more than the expense of transportation.

The great fertility of these lands, which are a black rich mould from two to five feet deep, and gently rolling,—their contiguity to this Road, by which every facility is furnished for travel and transportation, to the principal markets North, South, East, West, and the economy with which they can be cultivated, render them the most valuable investment that can be found; and present the most favorable opportunity for persons of industrious habits and small means to acquire a comfortable independence in a efw years.

Chicago is now the greatest grain market in the world—and the facility and economy with which the products of these lands can be transported to that market, make them much more profitable at the prices asked, than those more remote at government rates,—as the additional cost of transportation is a perpetual tax on the latter, which must be borne by the producer, in the reduced price he receives for his grain, &c.

The Title is perfect—and when the final payments are made, Deeds are executed by the Trustees appointed by the State, and in whom the title is vested, to the purchasers, which convey to them absolute titles in Fee Simple, free and clear of every incumbrance, lien or mortgage.

The Prices are from $6 *to* $30—*Interest only* 3 *pr. ct.*

Twenty per cent. will be deducted from the Credit Price for Cash.

Those who purchase on long credit, give notes payable in 2, 3, 4, 5 and 6 years after date, and are required to improve one-tenth annually for five years, so as to have one-half the land under cultivation, at the end of that time.

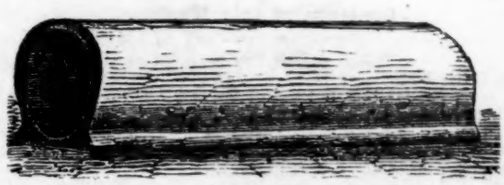
Competent Surveyors will accompany those who wish to examine these Lands, free of charge, and aid them in making selections.

The lands remaining unsold are as rich and valuable as those which have been disposed of.

SECTIONAL MAPS

Will be sent to any one who will enclose fifty cents in Postage Stamps, and Books or Pamphlets, containing numerous instances of successful farming, signed by respectable and well-known farmers living in the neighborhood of the Railroad Lands, throughout the State—also the cost of fencing, price of cattle, expense of harvesting, threshing, etc.,—or any other information—will be cheerfully given on application, either personally or by letter, in English, French or German, addressed to

JOHN WILSON,
Land Commissioner of the Ill. Central R. R. Co.
Office in Illinois Central Railroad Depot, Chicago Ill.
April 9—w&m6m



ALBANY TILE WORKS.

Corner of Patroon and Knox Streets, Albany, N. Y

THE subscribers, being the most extensive manufacturers of Draining Tile in the United States, have on hand, in large or small quantities for Land Draining, the following descriptions, warranted superior to any made in this country, hard burned. On orders for 10,000 or more, a small discount will be made.

HORSE-SHOE TILE CUT 14 INCHES LONG—PIECES.

2½	inches rise,	$12 per 1000
3½	" "	15 "
4½	" "	18 "
5½	" "	40 "
6½	" "	60 "
8	" "	80 "

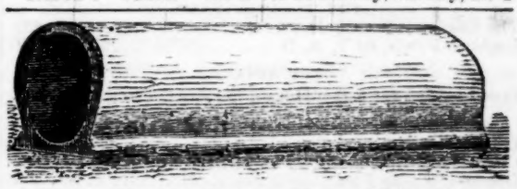
SOLE TILE CUT 14 INCHES LONG—PIECES.

2	inches rise,	$12 per 1000
3	" "	18 "
4	" "	40 "
5	" "	60 "
6	" "	80 "

Also on hand 6-inch calibre Octagon pipe, $20 per 100, and 8-inch calibre Round pipe, $30 per 100, for large drains—Cornice Brick, of the pattern used in the City of Washington, also on hand.

Orders respectfully solicited. Cartage free.

C. & W. M'CAMMON,
(Late BABCOCK & VAN VECHTEN,)
Albany, N. Y.
RICHD. H. PEASE, Agent,
Excelsior Ag. Works, Warehouse and Seed Store,
March 1—w&mtf 359 & 371 Broadway, Albany, N. Y



New-York State Tile Works,

On the Western Plank Road, near the Orphan Asylum, Albany, N. Y.

THE subscriber having purchased the Drain Tile works of Artcher & Co., offers for sale the following sized Tile:

HORSE SHOE TILE CUT 14 INCHES LONG—PIECES.

2½	inches calibre,	$12 per 1000
3½	" "	15 "
4½	" "	18 "
5½	" "	40 "
6½	" "	60 "
8	" "	80 "

SOLE TILE CUT 14 INCHES LONG—PIECES.

2	inches calibre,	$12 per 1000
3	" "	18 "
4	" "	40 "
5	" "	60 "
6	" "	80 "

I warrant every Tile perfectly sound, and harder and better Tile than any before made in Albany. If not, the purchaser need not pay for them. I will also undertake draining to any amount, and at any place, and furnish Tile for the same, and ask no pay until the employer is perfectly satisfied with the result. I am also willing to render my services in laying out drains free of charge, to any one who purchases Tile of me.

A liberal per centage will be allowed on orders for 10,000 or more. Cartage free. Gentlemen, your patronage is respectfully solicited. Orders from all parts thankfully received and promptly attended to.

GEO. ALDERSON, Albany, N. Y.,
(Late Artcher & Co.) Office 63 Quay Street.
EMERY BROTHERS, Agents, Corner State and Green Sts.
April 30—w4t&eow3ms—m6t.

Agricultural Books,

For sale at the office of the Country Gentleman.

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